CE B CE OVER ELECTRONICS

John Exer.

Australian

DECEMBER, 1982. ISSUE 117. Vol. 10 No. 12 $1.80*

MODEL RAILWAY

Magazine

THIS ISSUE:

Kit bash a Vic Rail 'VFNX'

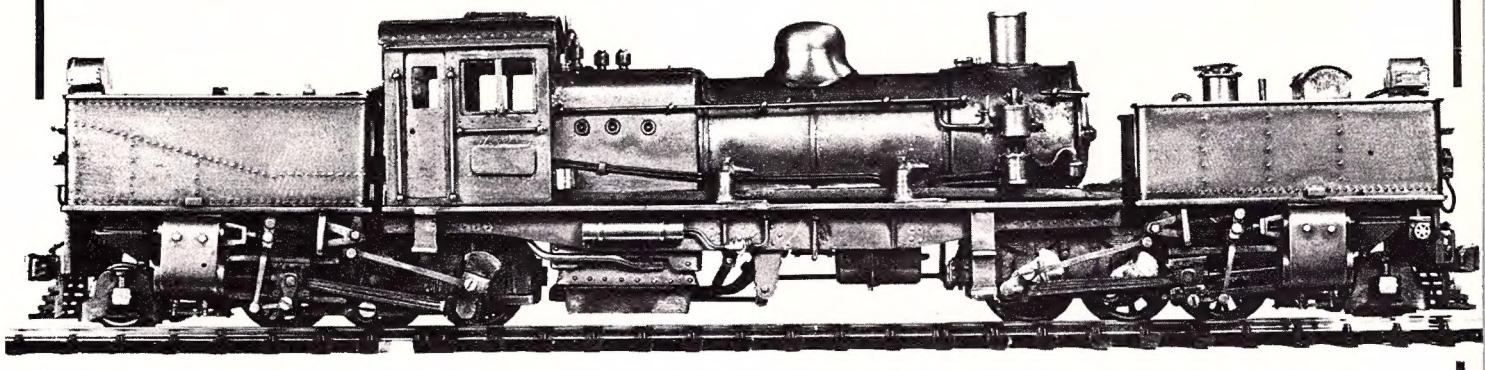
Plan of T.G.R. 'T' class

Westrail Wagon Recoding

Scratchbuild a SAR brake van.

Registered by Australia Post Publication No. NBH0729
*Recommended retail price only.

COMING!...
THE V.R. "G" CLASS NARROW GAUGE BEYER-GARRATT LOCOMOTIVE...



By way of a preview of forthcoming developments, this view shows the pilot model V.R. 2'6" gauge "G" Class 2-6-0+0-6-2 Beyer-Garratt Locomotive. The prototype of which were the running mates to the now famous 'NA' Class 'Puffing Billy' Prairie Tank Locomotives, on the two heaviest of the V.R.'s former narrow gauge divisions. Measuring but 49'10" overall, the 'G' Class Beyer-Garratt Locomotives, with their unique outside frames and many other interesting features, proved efficient, powerful machines and effected big savings on 'NA' Class Locomotive performance on the lines abounding with 1 in 30 grades, 2 and 3 chain curves and light 60 lb iron.

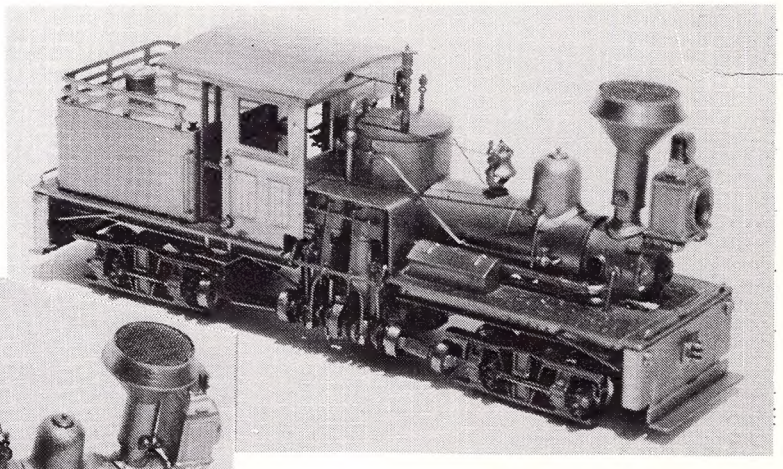
Production of the model is scheduled for the first half of 1983 and the total number of Locomotives manufactured will be limited to those who place an advance reservation, specifying desired finish and track gauge.

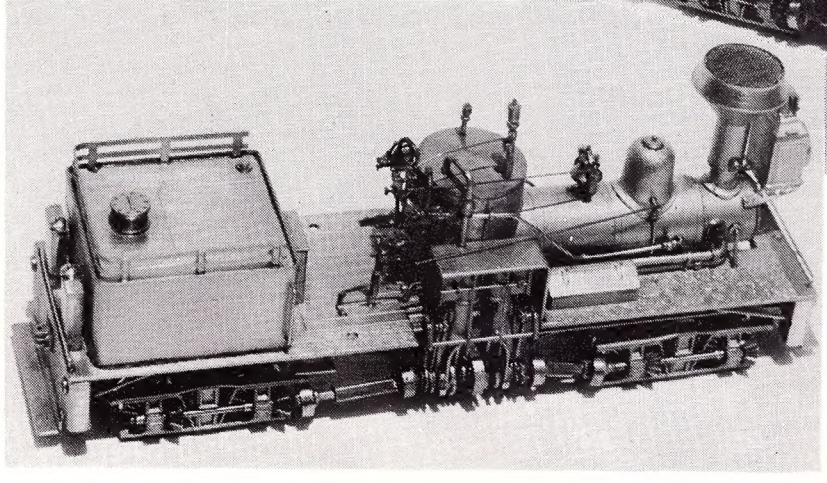
Estimated prices are as follows:-
Unpainted, polished brass finish: $755.00.
Painted, flat black finished: $785.00.
Track Gauges: Both HOn3 and HOn2½.

NOW IN STOCK...
THE BENSON LOGGING CO. No. 528 T — BOILER SHAY...
— IN BOTH HO & HOn3 GAUGES...

UNITED SCALE 合同 MODELS

Logging tramways spelt severe grades and rough, uneven track, for which class of service the fascinating Shay geared locomotive was unexcelled. The same holds true on the model scene as in the prototype and for loggers working in HO scale, now comes the





Benson Logging Co. No. 528 T-Boiler Shay Locomotive. From 'UNITED', the home of the finest quality geared locomotives. A diminutive 2-cylinder Lokie, complete with detailed cab interior and prototypical bevel gear drive. Model comes in both HO and HOn3 gauge versions. PRICE: $462.00, either gauge.

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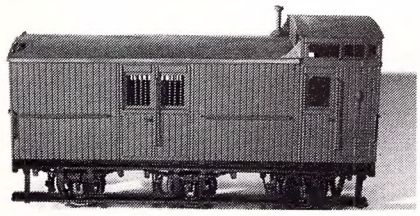

The first 2 shipments of our VR 'Z' Van have sold out BUT don't despair, more are on the way. The next run will have some detail changes and additions including 'sheeted' doors, a 6" horizontal board along the bottom of each side plus some other small improvements. This run of 'Z' Vans will be available with either 4 or 6 wheels. This will allow you to own no less than 3 permutations of the 'Z' Van - why not have one of each ? The 'Z' Van is manufactured for us by THE MODEL COMPANY of New Zealand. The model is made of brass, in HO scale and is painted and ready-to-run. Included with the model are decals, a marker lamp and one folded and one open tail disc.

VR 'Z' VAN $69.95

VICTORIAN RAILWAYS DIESEL ELECTRIC RAIL MOTOR

The VR DERM is being built for us by The Australian Locomotive Company in conjunction with DONG JIN of Korea. The model will be in HO scale and will include interior detail. It will not be available factory painted but a painting service will be offered. Decals will be included. Provision will be made for mounting Kadee couplers which are not included. The 'hand-built' model was expected early November.

EXPECTED PRICE: $275 EXPECTED DELIVERY: FEBRUARY 1983 DEPOSIT REQUIRED: $75
(All prices assume no major changes in Exchange Rates, Import Duty or Sales Tax)

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With our DIRECT LINK to WALTHERS computer and by using AIRFREIGHT from the USA we can get any item from the Catalogues, HO - O - N or DECAL, in as little as TWO weeks. (Paints and some adhesives come Surface Mail and take longer). To overcome this we keep the Floquil ranges of Railroad colours in stock - this includes Stains and Polly S as well as the laquers.

WALTHERS 1983 HO CATALOGUE:- Our first shipment of Walthers 1983 HO Catalogue left the USA, by Surface Mail, on 8/10/82. We hope they will arrive about mid-December. Our price will be $10.95 which is the US cover price. Postage will be:-

Victoria $2.00
NSW SA Tasmania $3.60
WA Queensland $4.40

Any order of 5 or more copies sent to the one address will be Post Free - get together with some friends or club members and buy in bulk and save.
The 1983 Catalogue will contain 656 pages and will include hundreds of new items and products from over 20 NEW manufacturers - a total of 272 manufacturers are listed in this 'bible' of Model Railroading. There are 137 pages in colour.
Every purchase of a copy of the Walthers 1983 HO Catalogue entitles you to receive our Walthers 'Update' (Walthers Craft Train News) service free of charge for one year - January to December 1983, 12 issues. Both the Update and Bulk Order offers apply only to Catalogue orders received before 31/12/82.

? ?

After the 'Z' Van, the DERM, the 'N', the 'K' and the 'R' - what next ?

From McBEES:- our next two VR Vans will be the C & ZLP Vans. (The 'C' Van is an ideal companion for the DERM). We are planning 2 variations of the 'C'. Following the 'C' will be the 'ZLP'. If all goes according to plan both vans will arrive during the first half of next year. Prices to be advised.

From AUSTRALIAN LOCOMOTIVE COMPANY:- the next release will be the 'J' Class steam loco. Delivery has been 'put back' to March '83. Price will be $395 - deposit required is $100. Specify coal or oil burning version when ordering.

From BROAD GAUGE MODELS:- we understand that the next model from this firm will be the 'A2'. As yet we do not know a price or what version of the 'A2' will be built.

NEW RELEASES .. NEW RELEASES .. NEW RELEASES .. NEW RELEASES .. NEW RELEASES .. NEW RELEASES .. NEW RELEASES .. NEW RELEASES .. NEW RELEASES

Z VAN DETAILING PARTS:-

Marker Lamp with 2 red jewels	(2)	$2.70
Axle Box	(4)	$3.60
Tail Discs	(3 pair)	$1.30
Chimney	(1)	$1.80

Coming early '83 are Z Van Buffers and Small Side Marker Lamps. Price to be advised.
The Tail Discs are etchings, other items are brass castings.

CAMCO:-
NSW 'FO' End Platform Coach $14.95
Kit includes decals, wheels with bearings and bogies.
The CAMCO 'GSV' and 'CW' are still in stock at $7.15 each.

FYBREN 'N' SCALE:-
VR 'VLX' VAN with decals and bogies $9.00
VR 'VLX' VAN with decals only $7.00
Remember the VLX is in N Scale.

BROAD GAUGE MODELS:-

Detailing Kit for the VR 'GY' $6.50
This detailing kit contains enough parts to 'super detail' 5 GY's. Kit is etched brass with some lengths of wire and an instruction sheet.

*****

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McBEES

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TRC Refrigerator Van	$6.40
CCH Coal Hopper	$5.65
RU Wheat Hopper	$5.65
K Wagon	$5.25
AR KITS NSW SRA BCH Coal Hopper	$5.65
NSW SRA GLV? GLX Louvre Van	$4.70
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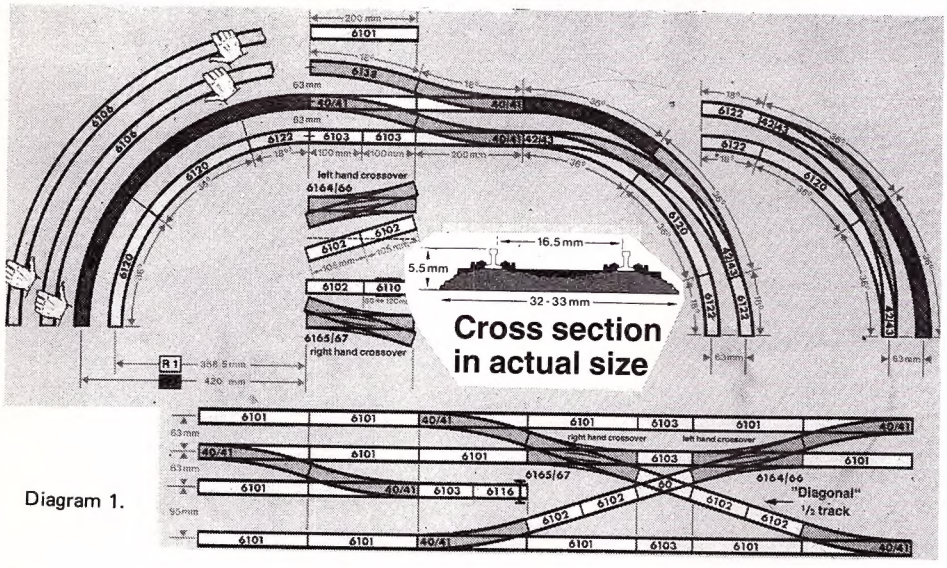

Diagram 1.

The FLEISCHMANN "PROFI – TRACK" for Professional realism !!!!! HO/OO Ready Ballasted Nickle Silver Code 100 track system

Diagram 1. shows the symmetric track geometry of FLEISCHMANN "PROFI – TRACK" system.
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Diagram 2. "PROFI – POINTS" are "Thinking Points" too !!!!
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NEW RELEASE

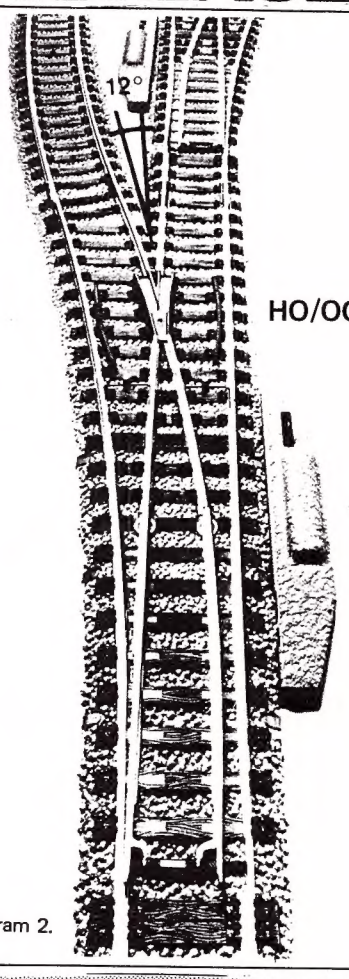

Diagram 2.

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See catalogue listing

BRAWA – Realistic operating Accessories, lights and electrical items.

HAG – Powerful, all metal locos of Swiss type. AC 3 rail and DC models.

MARKLIN – Australia Wide Mail Order experts for all Marklin equipment.

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HAG – Models of Swiss prototype	2.00
MARKLIN – HO, Z, &No. 1	3.50
METROPOLITAN–European HO brass to N.S.W.	21.50
Interstate	24.00
Swiss N guage brochure	.40
ELECTROTREN – HO	2.50
LOCOMOTION -ELECTRONIC controllers	.27
SOLOTA Multi--Train Control	.30
SEUTHE SMOKE GENERATORS etc.	.27
BRAWA -HO,N,Z, operating access., etc.	2.75
BUSCH – HO & N Scenery materials	2.30
FALLER – HO, N, Z Kits	3.00
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BGB (SAR & VR Railways)	
VR VLEX (VSX) Louvre Van	7.95
VR VLF-VLX Louvre Van	7.25
VR VBBY-VBBX Louvre Van	7.25
VR VOBX (ELX) Gondola	7.25
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Above kits require bogies and couplers	
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Above kits require bogies and couplers	

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HOn3 Arch Bar Freight Bogies	5.50
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Gas Electric Body Kit Asst	11.80

NEWS BITS

Due about now is the 1983 Walthers HO Catalogue which should sell for $10.95 each. We still have limited stocks of the N Scale Catalogue at $6.00 and Decal Catalogue at $3.50. New in stock are the Mark III NMRA HO Standards Gauge at $3.95 and Details West 50' Plug Door/Sliding Door Box Car in BN, D&RG & Milw at $10.75 ea. Please note the devaluation in the Australian dollar and the increases in Sales Tax are forcing us reluctantly to increase our prices. However we believe we still offer the best bargains around as comparision of our prices will show.

Please note packing & postage is extra on all items and is charged at standard Post Office rates plus 75c packing fee. Pleasee allow extra any excess is refunded.

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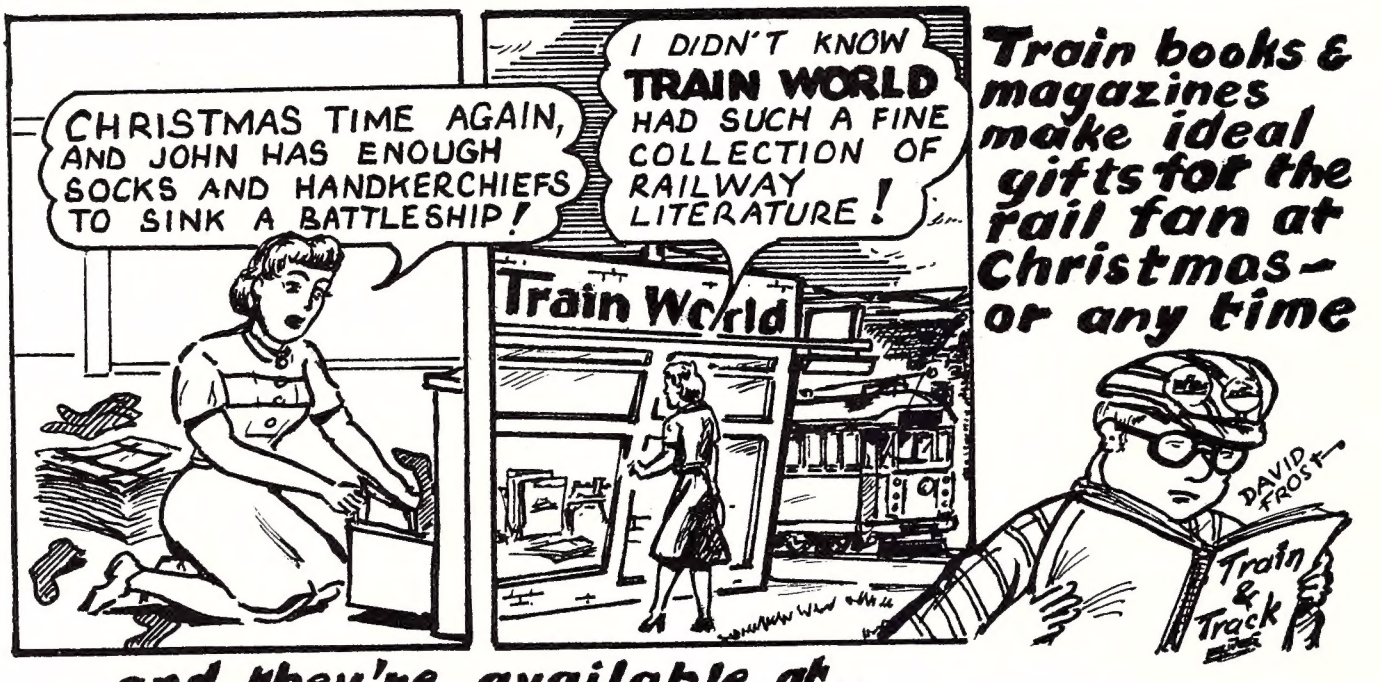
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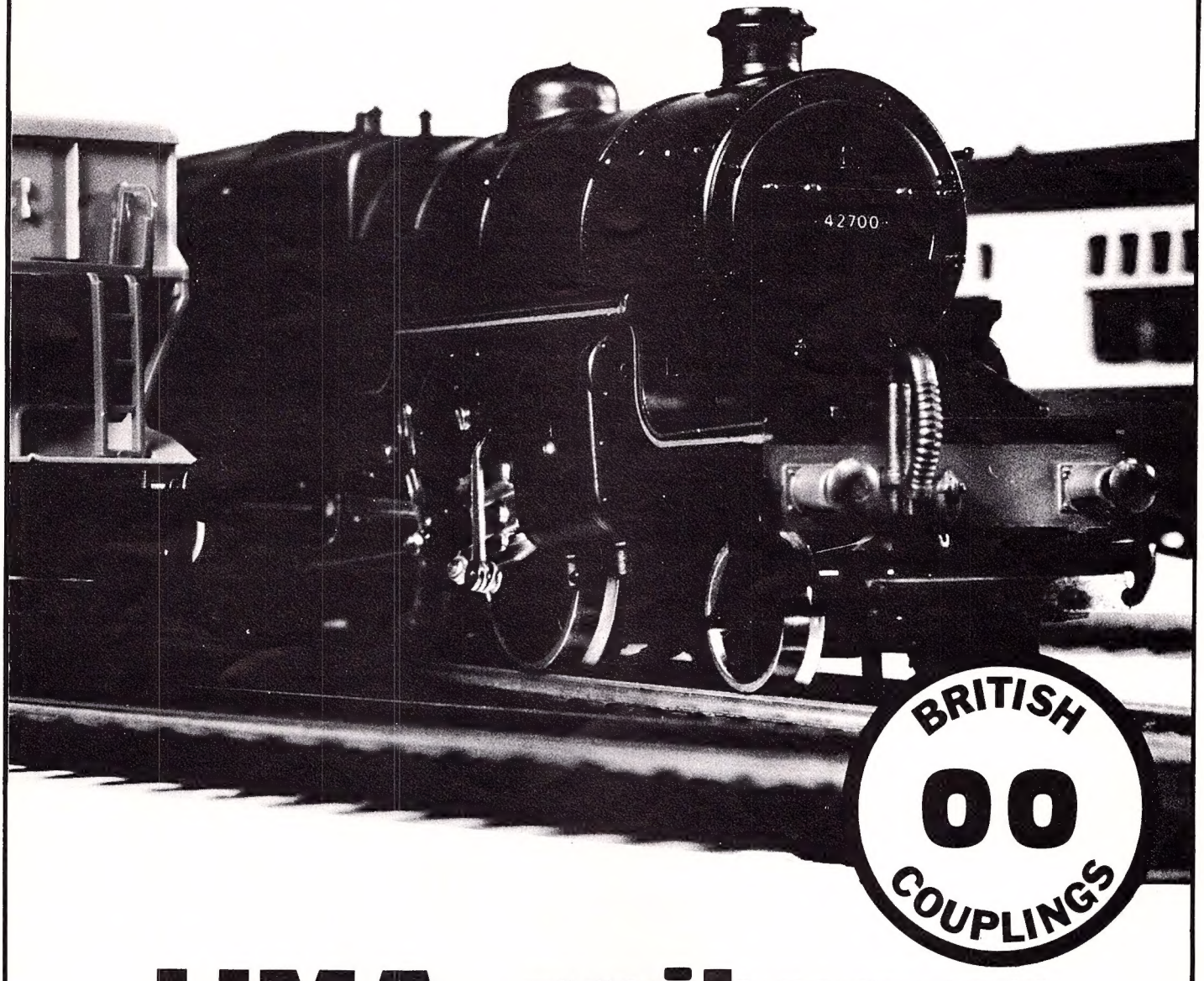

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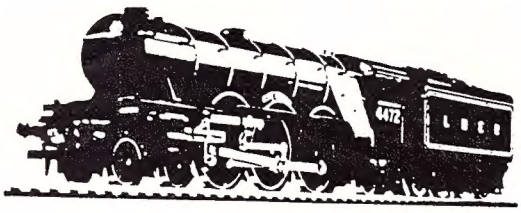

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VR 'N' Class (SAR 750 Class) 2-8-2, superb brass HO model		$395.00
New Model 'J' Class out soon (brass)		$395.00
WRENN Nickle Silver HO/OO track		$ 2.60
ALL AUSTRALIAN LIMA 44, 42, 'S', GM	ea	$ 32.00
LIMA AUSTRALIAN COACHES		$ 9.00
State which one required.		
PECO Point Motor		$ 3.50
LIMA English Deltic (Blue-Green)		$ 32.00
LIMA C38 Locomotive (Black/Green)		$ 62.00
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WEICO white metal body kits
N.S.W. 421 class **N.S.W. 442** class
N.S.W. 422 class **N.S.W. GHG** Guards Van
Holden FX sedan Holden FX ute

Roller Bearing Bogies metal wheels

HO MODELS

STILL A FEW AVAILABLE!
Brass HO **VR 'N' class (SAR 750 class)**
D3 from Broad Gauge Models

VR 'J' class is expected in late 1982.

Broad Gauge Bodies (BGB)

Limited quantities of earlier kits are still available
VIC BMX-BP Box Car incl. decals
SA & VIC Tarpaulins – range of colours, 10 per set
VIC & SA Overland decal set
NEW! NEW! NEW! from **CAMCO.**
N.S.W.G.R FO open-end passenger coach
N.S.W.G.R CW 4 wheel cattle waggon.
N.S.W.G.R GSV 4 wheel sheep van.
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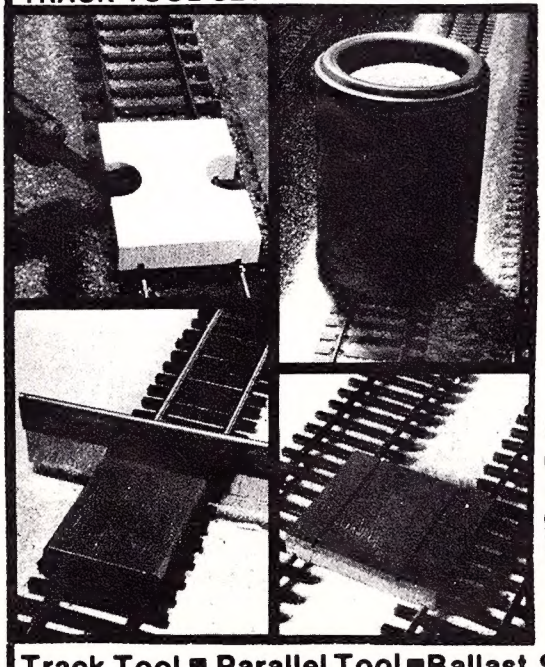

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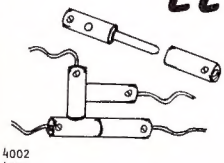
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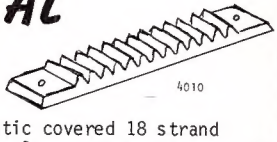
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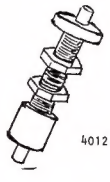
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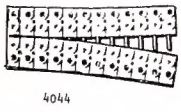
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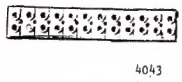
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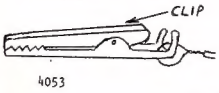
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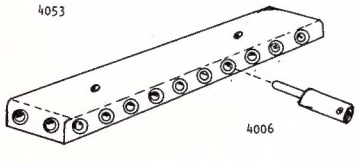
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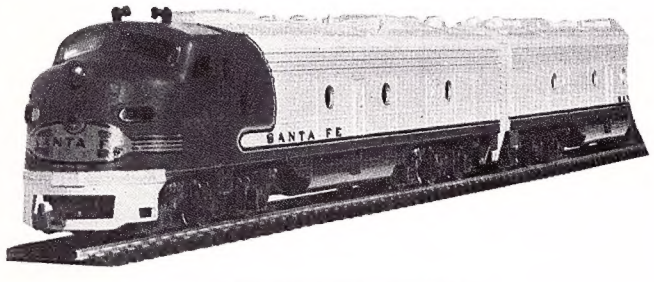

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Australian Model Railway Magazine

COMMENT

ADVANCING TECHNOLOGY

Twenty years ago, when this magazine was first produced, model trains were advancing from a rather crude (by today's standard) tinplate and diecast production methods. At that stage in time this magazine was produced in lithographic form where all text was produced in lead and tinplate letters and assembled onto a printing machine while photographs were made into blocks by a chemical etching process. Like tinplate and diecasting manufacturing methods this was a slow and expensive task.

In the early seventies injection moulded plastic was used to produce models, as on the Australian scene a few fledgling manufacturers were using polyester and epoxy resin to produce Australian profile models. On the magazine scene, AMRM was being produced by the offset process whereby the printing plates were produced by photographic process. Text was generated by mechanical (typewriter) typesetting and glued in place while photographs were stripped in place by the platemaker. Like the local manufacturer a better product was being produced more cheaply, but the process was time consuming.

There is little need now to amplify the standard of model railway manufacturing. Injection moulding has become cheaper to apply due to advances in the process, and the local models are produced to a higher quality due to improved techniques. Likewise, magazine production has simplified by the use of computerised typesetting whereby one machine produces all the text by the use of the photographic process, and photos are added by the use of screened bromides.

Unfortunately, there is still the need for the time-consuming task of keying in all the text into the typesetting machine. In all, articles like this comment can by typed up to four times before they are produced into a galley bromide. Well, if all goes well with this experiment, the time-consuming duplicate typing will no longer be required. This text is being produced (at great duress by Allan Brown) on a word processor (micro-computer) onto a disc. The contents will be either inserted into a typesetting machine or despatched via Telecom to the typesetter over the phone. Either way, a number of processes have been eliminated, saving time and money.

The fact that this is being published is a guide that another new technology has further aided the model railway hobby.

Bob Gallagher

ON THE COVER: *When steam was king, and the NSWGR AD60 Garratts in service, the 'name' train in the west of NSW was W44. W44 was the train of CG or GP open wagons carrying the very heavy zinc concentrate to Sulphide Junction in Newcastle from Broken Hill. The photo supplied by Chris Pratten shows 6039 leading a double headed W44 between Molong and Borenore in August 1962.*

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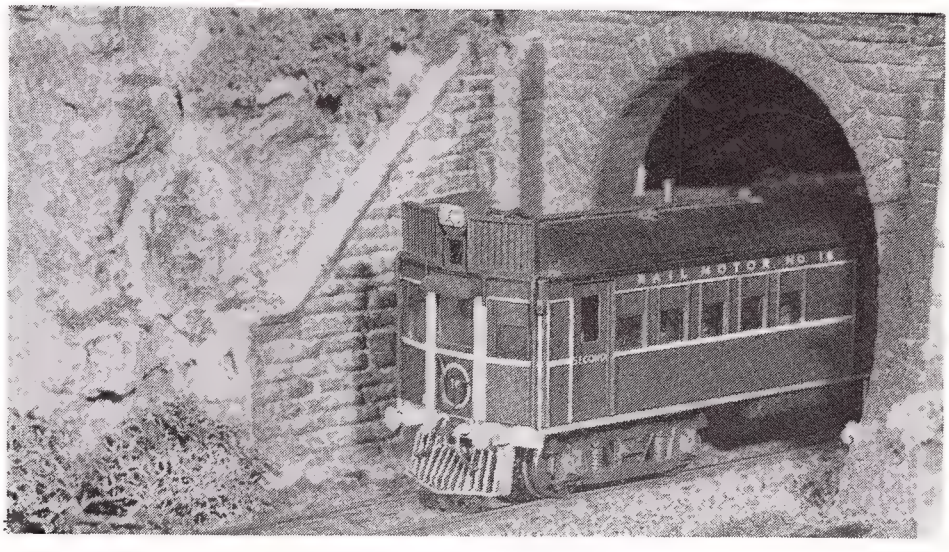
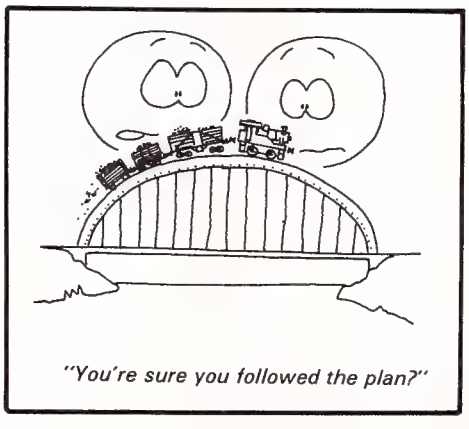
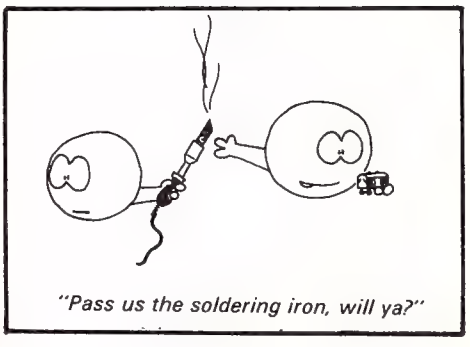


CPH 16 emerging from the tunnel mouth. This scene was photographed by Graham Ball on a scenery module. The CPH, a HO model, was scratchbuilt by Graham Pantlin. The basis of the model, is a perspex shell, with styrene strip overlayed. More details of Grahams' work will be shown in a future issue.



"You're sure you followed the plan?"



"Pass us the soldering iron, will ya?"

SCENIC ROUTE

Bob McCully is credited with being the originator of 9mm scale modelling in New Zealand. The scale is almost twice the size of the more popular $^{3}/_{16}$'' scale or Sn3½ scale.

As New Zealand Railways run on a 3'6'' gauge (1067mm), the 9mm scale models are really narrow gauge models and, as such, run on a 32mm gauge track.

The advantages of 9mm scale is displayed in the accompanying photographs. With the large size it is possible to obtain infinite detail in all modelling aspects.

The feature of these photographs is the model of the N.Z.R. 'Rogers K' which was built by Jim Harwood. The model took out major prizes at the Hobson's Bay Convention in Victoria in 1981.

In the photographs the Rogers 'K' is shown on Bob McCully's layout and the premention detail is obvious. As can be seen the fences have been fabricates as per the real thing, including the five strand wire fence.

With the large scale it has also been possible to highly detail the scenery and undergrowth, so why not add a rabbit. Unfortunately these photographs are not in colour to truly illustrate the craftsmanship of the modelling.

Top: NZR Rogers 'K' 2-4-2 heads a short passenger into the tunnel.
Centre Top: Fences, shrubbery and a rabbit.
Centre, Lower: The Rogers 'K' passes a broken down truck. Note the five strand wire fence, roadside markers (rock painted white), undergrowth and trackwork.

Below: The Rogers 'K' pauses while farmer Davies drives his tractor over the level crossing. Waiting patiently on the side of the road the members of the hunt club await a clear crossing.

Photographs by Bob Gallagher.
Acknowledgement for assistance to Es Davies, Robin Knight and Bob McCully.

ROWEN

A report on a Victorian 'N' scale 6ft x 4ft layout, as described by Rowan Cole

Preliminaries:

The previous experience was a 6x4, Triang-Hornby, double oval, very simple, highly unrealistic, totally impractical layout. I had done all scenic work possible, fitted lights and the whole box and dice, but decided it was time for a change when the points began to fail, the rails rusted, and I had perused three years (from November '77) of Railway Modellers and one year of AMRM.

From mainly English I decided to go all out Australian (preferably Victorian) and into N gauge (to give a more spacious feeling in the limited size).

Baseboard:

This remains from the previous layout, after vain attempts to try and sell it, and is 183cmx122cm (6'x4'). The frame is 7cmx2cm pine, and is joined by glue, screw and bolt. To bring the layout up to a reasonable operating height, new 4cmx4cm legs were fitted with coach bolts, which with castors raised the tracklevel to 67cm, or 26½".

The top is plywood, which is not as bad as everyone says, although the next top will be a few inches of expanded polystyrene foam on chip or fibre-board. There were also 30cm plywood side protection boards, one which folded down as the control panel, but two have and the other two will be removed to give "ground level" views. It can be successfully stored on one end.

Design:

The track-plan is an adaption of Elmore* and was chosen for its simplicity (so as the layout could be completed "quickly" and cheaply) and ability to be condensed to give a spacious feeling.

*(One school holiday I dragged Dad from Melbourne to Echuca and return, stopping at about twenty stations, taking track-plans, pictures and building construction notes. It only took a day and a half, and was well worth the effort.)

After many attempts to fit the point work the final design was decided upon, and drawn out full size on white lunchwrap fixed to the baseboard. Track and scenery were laid straight over the top of it.

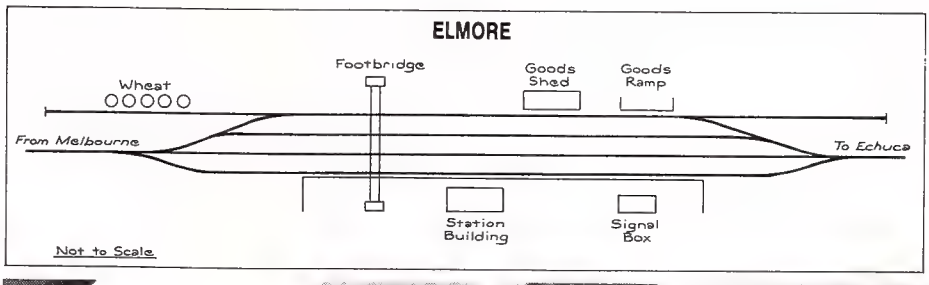
The platform was going to be curved, to opposite the loop point, but construction difficulties designed it to be straight, which is still quite acceptable. Other physical features were thought up, placed, and rejected, or accepted and built.

The background ridge was decided upon as the easiest way to disguise the entrance and exit of the track, but the viaduct type right hand tunnel mouth was simply a whim of mine.

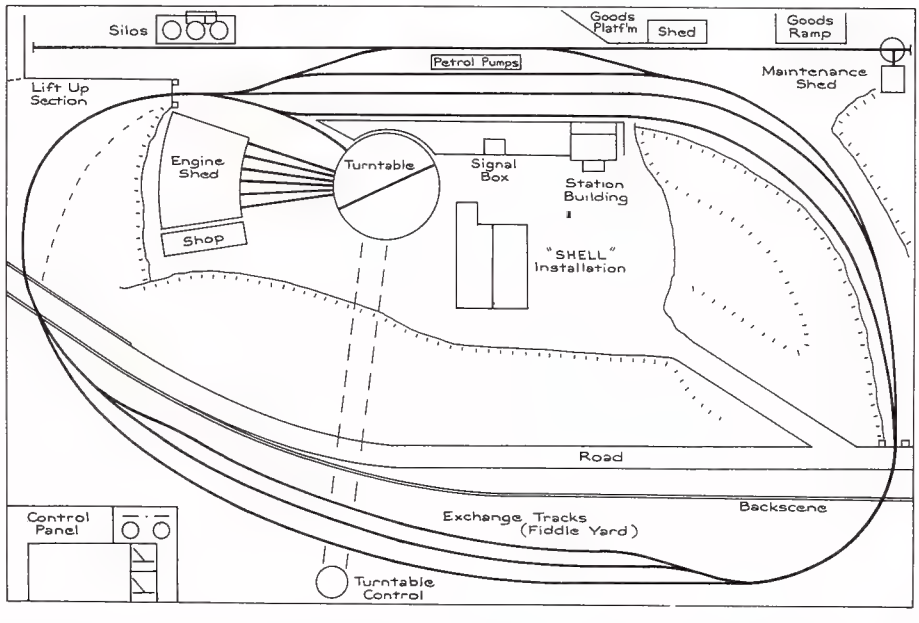
Electrics:

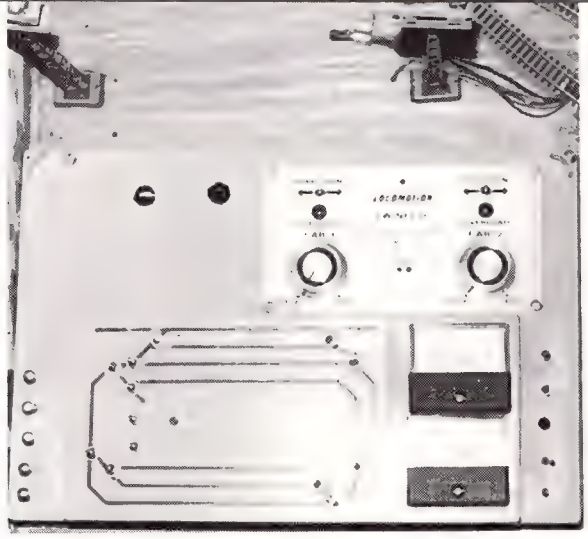
Using what I thought common knowledge and a little help from magazines I began wiring up, which I did in blocks:control, points, lights. Without any formally written plan I started and simply plodded along until a section was finished. All point, turntable and light switches are Locomotion, which I have found more reliable than any other. Power is from two old Triang units, one controllable and the other a P2, each at least ten years old. Both are mounted on a shelf under the baseboard. One provides 15V AC for the Locomotion Mk2 Twinette, the other 15V AC for the points and controlled 12V DC for the lights, which normally run on 7V.

The Locomotion controller was admittedly very expensive, and at first I had no intention of buying it, but it is good. Performance can be checked with the Minipa ammeter and voltmeter. These at $8.50 were the best value I could find. The ammeter has a range of 0-5A DC, and the voltmeter 0-20V DC. Both have 5½"x5" faces. An Electro-Rail capacitor helps the points literally snap into position. Points operated in pairs are wired to one switch, and screw connectors are utilised near the motors and control panel; in fact all wires to the control panel go through screw connectors. A Relco does reduce the time taken cleaning track.



The station area. Scenery is still being added.





Control panel, behind the scenery line.

Grain silos, station area and author feature in this photo.

A birds' eye view of Rowen. G. Ball photo.

A Bachmann powered VR look-alike pulls into the platform road. G. Ball photo.

Lights use a common return to avoid cables evolving. The control panel is neat and logical on top, but at first sight underneath is a mess, there being tremendous slack in the wires to allow the panel to lift up. In reality the control panel is an upturned pencil drawer, and any wire can be followed through easily.

Trackwork:

All track is Peco, and the points range from medium to large radius, straight and curved, and as previously said are powered with Peco motors. The rest is nickle silver flexible track. It was all laid on cork strip, and then pinned with Peco pins. The ballast used is commercial crushed stone, which was poured and shaped where it was wanted. then with a $2 "Mr. Mister" mister a very dilute washing-up detergent/water mix was sprayed gently on. (The spray gun was chosen as it had an adjustable nozzle.) Once the ballast was throughly saturated, dilute (1:10) Aquadhere was droppered on the ballast, which permeates and dries to make rock solid track surrounds.

Scenery:

The background ridge is expanded polystyrene foam, from a convenient, new TV, which was covered with nylon garden mesh, and smothered with plaster and toilet paper. The plaster is very cheap, and I feel is better to work with than paper mache. At the "viaduct entrance" the actual facade is cut from Peco stone walling, and both tunnel mouths are Peco single track road bridge sides. Over the right hand tunnel is a removable section, made from a cardboard base and a lot of thin layers of plaster. A suitable mix (to get the right colour) of flock was sifted over the plaster with a tea strainer. Again the detergent/water mix was sprayed on, and the Aquadhere applied. The result . . . rock-hard grass!

Structures:

The Station platform is constructed with Peco brick platform edging and criss-crossed cardboard strips to support the thin plastic card top. Overall it is 58cm long and 5cm wide.

The station building is Model Power 1520 "Mini Station", a direct copy of a Pola continental station. All that was used from the kit were the walls and doors, with corrugated aluminium substituted for the roof, and verandahs fitted. It sits over a balsa square fitted to the platform to leave it movable for access to the grain of wheat bulb inside.

The signal box is a cut down Peco weatherboard signal box, and now sits 29mm high. The windows have been glazed, and it is waiting for interior detail. It also sits over a balsa square for anchorage.

The goods shed is Heljan B641, with the office removed and a corrugated aluminium roof. It sits on a balsa platform and over a balsa square. A full interior has been included, but can only be seen from "ground level" or with the light on.

The Shell Petrol Installation is made from the two Kibri kits B-7470 and B-7462, although the tanks were "Aral", but were bought for economic reasons. (The Aral tanks were old stock at $15. The Shell tanks would have had to be ordered, after the Budget, for a price of $24!)

They are straight from the expensive kits. One thought for sticker preservation is to cover them in a few coats of varnish. Both pump house and office have lights and removable roofs.

The Locomotive Facilities include; The roundhouse is Heljan B643, with the operating roads' doors left off. Two roads have been "closed" and are overgrown with grass and weeds, and a light is fitted.

The turntable is also Heljan, B646, and is

straight from the excellent kit. I find the cord control quite effective and the electrical connexion ingenious as well as easy to install. The turntable has a reversing DPDT feed, and each track an on/off feed to allow full operational capabilities. The turntable office is from the goods shed, straight from the kit, and is lit. Power wires will be installed from the gantry to the office.

A Heljan goods shed from the previous layout poses as a work shop, but may be disposed of.

The Silos are wholly scratch built. They were "designed" from photos and what looked right, but no plans were drawn until after they were completed. The base is balsa, and each silo is cardboard, formed around a small Vegemite jar, and held together with sticky tape. The roofs are thin paper. Pipe work is plastic tubing. The tower is paper around a balsa former. The shed is simply corrugated aluminium to disguise where the exchange facilities should be. One Peco hut poses as a weighbridge hut, and the other as a tool shed. Silos are painted with Humbrol aluminium, the rest is concrete or light grey.

Silo: diameter 60mm; height of wall 70mm; height to peak 81mm.

Tower: length/width 20mm; height of wall 145mm; height to peak 155mm.

Exchange Shed: length 69mm; wall height 25mm.

Locomotives:

GP 40. The first acquisition, and the cheapest ($21, 1-81). It is Bachmann 4600, eight wheel drive and pick up, very sure footed, and has excellent haulage capabilities.

I have repainted it as Bachmann did their HO GP 40, although I do not kid myself by calling it an X. At a distance it fools most people for a T, but I will probably code it as a GP! At least it would not be impersonating something which it is not. Decals are the excellent Mn'J, and paint is Floquil R50 Dark Blue (I only got it for the colour, all my other enamels are Humbrol). It has been well weathered and I fitted the Kadee couplers myself.

SD 45. The sceond lomotive, and the second cheapest ($22, 3-81). A Model Power production, 7571, with good pick up, but without the traction tyres fitted, cannot pull its own weight. It is without them now, while I search for the elusive hen's teeth. At the moment it is in the colours as above, until I find a Lima FP 45 body, and couple its nose with the SD 45 body to make a C The Kadees were from a conversion kit, which was very convenient and easy, although expensive. I recommend them.

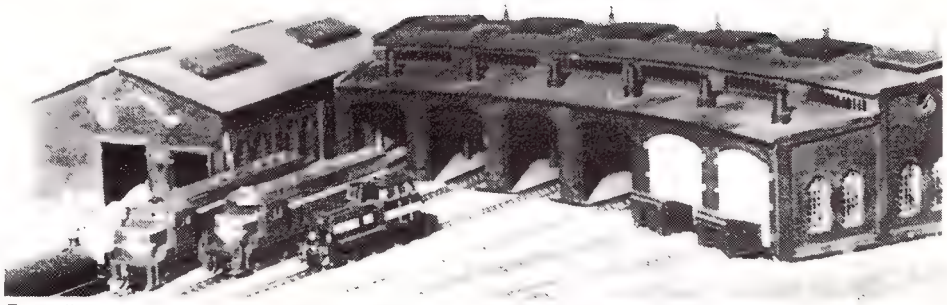
Industrial Diesel. I saw this (Fleischmann 7218) in Airfix Model Trains, and at first glimpse it appeared similar to an M or V. It is the smallest, most expensive, and best locomotive of the stud ($45, 6-81). It is amazing that for a locomotive which literally falls apart to body, motor and chassis, that it runs so smoothly, to such a slow crawl, and for such a short wheelbase loco pulls a surprising load without traction tyres, and has good pick up!

The chassis needed a considerable amount of hacking to accept the couplers, which is the first time I have hacked an "expensive" loco. It has been repainted Humbrol Midnight Blue and Humbrol M24 yellow, but only following the previous scheme.

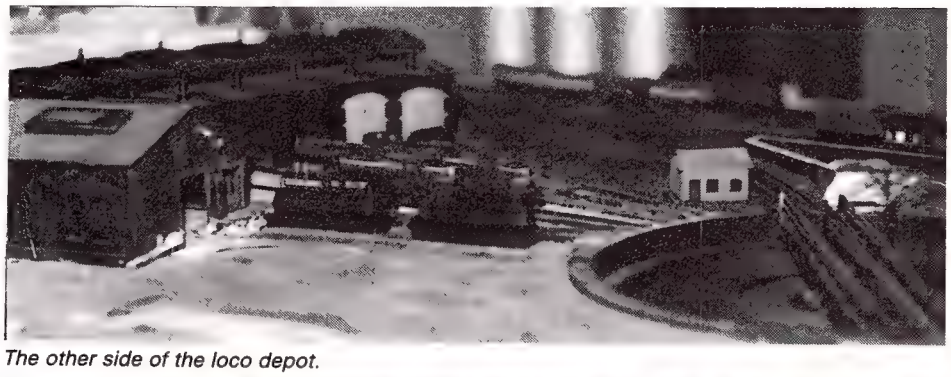
Only one of two more locos may be bought; a Minitrix V60 for a W, or a Fleischmann track cleaning loco.

Rolling Stock:

The two AS coaches are Weico, neither of which turned out particularly well, but are vastly improved with their (Mn'J) cheat lines. The roofs have been painted matt black to simulate the grime, and the glue I found best for the job is Super Jet, an instant drying, liquid super glue. To improve rolling characteristics I am thinking of superimposing the Weico sideframes on Kadee bogies. I am thinking . . .



Roundhouse by Heljan and the locomotive power of Rowen. G. Ball photo.



The other side of the loco depot.

Loco depot and grain silos.

Two Lima Pennsylvania coaches (320343) have been cut up, reassembled, repainted with Polly S PR 20 Caboose Red and fitted with Kadee four wheel bogies. It would be nice to know how accurate these stop-gap coaches are, as I only worked from photos.

ELX's. I have four, all on Kadee 1003 Bettendorf Medium Extended bogies, which use their own pivots, replacing the originals, but maintain the correct height. Paint is Humbrol Rust. With the transfers I found it best to flow on Decal Set (Testors), place the decal on top, and work the decal with a brush from the centre, working outwards, while the brush pushes towards the centre, forcing the decal into the corrugations. Sponge up the excess Decal Set with a tissue and then give two generous coats of matt varnish to seal all the decal surface open to the atmosphere.

The GY's are four Friedmont kits, on cut down Peco 10' chassis, with carved balsa formers underneath the Bowscot de luxe toilet tissue (it's nicely fine). The Kadee coupler recesses helped greatly. The three yellow ones were painted with Humbrol M24, and the red one was a red/brown mix. All have been weathered and are awaiting coding, and the tarpaulins are varying shades of green. (As one can not see the embossed doors it may be that they are really RYs!)

Three are Friedmont B's, one is s Friedmont U, another is an unknown Friedmont, and the last is a Lima 10' van. They are on cut down Peco 10' or 15' chassis, and are all rust with dark brown (Humbrol M29) roofs.

The Container Wagons are Two Lima 320796 bogie flats with the standard couplers removed from the bogies and Kadees fitted directly to the underside of the frame. The containers have been shuffled and dirtied.

Two pairs of Kadee normal Bettendorf bogies were bought for the ELX's. Once it was found that the coupler shanks were too short, I decided to do something with them. The outcome is two bogie flats with balsa tops on plastic stiffeners with lead ballast. On top are match stick bolsters with cut down pin stays. The load is metal U rods in formation.

Brake Vans:

The C's are two Friedmont Z's as modelled in the C article in May/June '81 AMRM. The only problem were bogies, so I decided to sacrifice below the floor and used Kadee four wheel passenger bogies with closer bogie centres to compensate for the large coupler overhang, even though the couplers were mounted further back than previously possible.

The Z's are also Friedmont castings, on modified Peco 15' brake chassis. All brakevans

Continued on page 42

NSWPTC 'FG' Economy Class Car

— Article by Paul Rogers

— Plan by Roger Johnson.

The Second World War placed heavy demands on the New South Wales railway system. Heavy engineering facilities, such as the Chullora Workshops complex, were engaged on the production of armoured fighting vehicles and aircraft. A large number of passenger cars were assigned to troop and hospital train duties. Petrol rationing was in force, and additional passenger traffic was encountered. To overcome the coaching stock shortage, a program of carriage building was undertaken by Eveleigh Carriage Workshops during the early 1940s, the FG cars forming a portion of this work.

The wartime environment reduced the need for specific types of rolling stock, so that the underframes from 6 BKG bogie horse boxes were taken into shops for marriage to new coachwork. The first of the 56-seat FG cars appeared on November 10, 1942 and the last on December 24, 1942. Serial numbers allocated to the new vehicles, 648, 659, 662, 670, 675 and 689 — were those formerly used by the displaced horse boxes.

The FG car, which being devoid of any first class or composite counterpart is unusual for NSW practice, consists of a timber body mounted on a steel underframe; a point to be noted is that these coaches coased the elimination of the steel underframed BKG horse box from the NSWGR register. Access to the FG vehicle is by means of a centrally located door on each side of the car. The interior consists of a centre aisle layout, each of the two saloons seating 28 persons. From the central entrance, each area of accommodation contains a single "twin" seat on each side of the aisle, followed by two sets of "twin" seats on one side of the passageway and two sets of "triple" seats on the other side of the passageway. Each set consists of two seat units fixed in "back-to-back" formation. A further row of seats — a single "twin" seat unit on either side of the aisle — is placed against the bulkheads which separate the accommodation and amenities areas.

The accommodation in each saloon is similar, although the rows of "triple" seats are placed on the opposite side of the aisle in one saloon. The unorthodox "5-across" seating in the FG cars resulted from the use of seat units taken from 'N' type passenger cars requisitioned for military service.

Corridor connections are fitted to each end of the FG vehicle. Each right hand corner of the car contains a toilet/washroom facility, while each of the other corners holds an additional washroom. Plate buffers and screw couplings were originally fitted to all coaches in the class, the tare being nominally rated at 27 tons and gross mass set at 31 tons. Bogies used for the FG cars as built were the 2BK type of 7'0" wheelbase.

The original livery is understood to have been the tuscan red and russet scheme then standard for NSW passenger stock. But for most of their careers the FG cars carried the monotone of tuscan red relieved by double yellow lining. For a period around the mid 1960s, the NSWGR employed single lining only for quite a few carriages, the yellow band running along the bodywork below the windows, and at least one FG car, no 689, had this simplified treatment. During the early 1970s a return was made to the double lining in respect of the vehicles concerned.

The Public Transport Commission of New South Wales has had several logos since its inception in 1972. The Mk 1 style, featuring the letters "NSW" sandwiched vertically between two arrows, has appeared on FG. 670 above the side windows near the left-hand diagonal corners of the car.

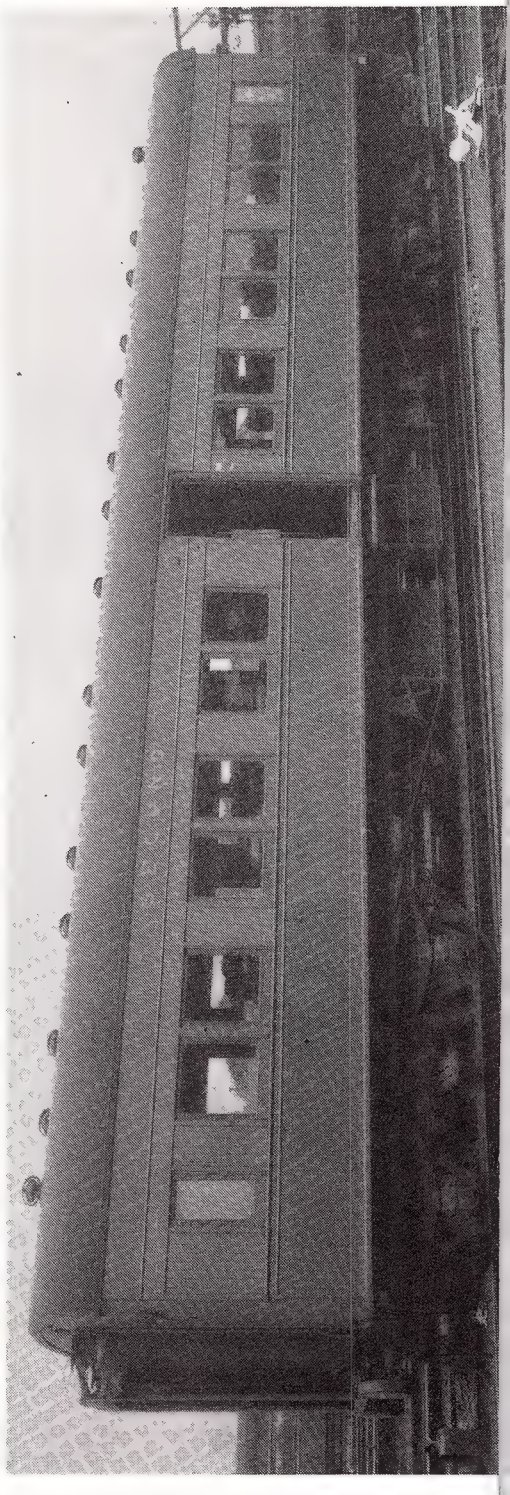
Aside from livery, other external changes have occurred. The "SECOND" class designations have been removed from the letterboards of most FG cars, while no 659 has been rebuilt in single letterboard fashion and fitted with a pair of former Sydney suburban electric "P" type bogies. In recent years, cars 659 and 670 have received automatic drawgear.

The principal role of the FG cars has been to serve as independent vehicles; although they have been used extensively to bolster car sets; in particular, the Moss Vale Passenger schedules during the late 1960s and throughout the 1970s. It was once a fairly common sight to see three FG cars leading 6-car SEB.100 set (and later 7-car SOB.102 set) on the down journey of this train. The "R" cars have gone from the Moss Vale run, but today the FG cars can still be seen, in company with supplementary interurban stock. It is believed that cars 648, 659, 662 and 675 were fitted with gas heating during 1979 for this particular service, a modification which reduced the capacity of each affected vehicle to 54 seats.

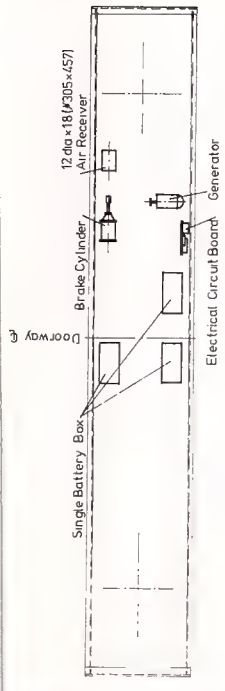
As the FG cars were fitted with toilets they were suitable also for country services, but the presence of "5-across" seating did not make such workings desirable. Nevertheless, they have been sighted on passenger services to Canberra, Grafton and Armidale on several occasions during the last decade, and this employment has become more frequent during the immediate past owing to large scale demise of mainline corridor cars.

The most unusual working of an FG car occurred during 1973. In January of that year interurban electric cars CF.5034 and ETB.6033 suffered fire damage at Gosford. These cars were never repaired and spent several years in storage at Chullora Elcar Workshops before condemnation in 1976. The loss of these units in 1973 caused a re-arrangement of schedules covering stainless steel stock and it was necessary to return locomotive-hauled NIB.111 set to commuter service. At that time this block consisted of only four 'N' type vehicles, so two further carriages — BR.1719 and FG.670 — were added to the formation. The FG car became a temporary terminal unit and carried the inscription "NIB.111 temp" on the outer end. The set was marshalled HFN.2184, FN.2192, FN.2196, HFN.2190, BR.1719, FG.670. This arrangement was later altered by the deletion of the "odd" cars from the rake and their replacement by FN.2206 marshalled between its sister vehicles.

The FG car is also notable as being the last group of non-airconditioned NSWGR passenger cars to have all its members on the books. In practice, however, car 689 has been in storage for some years, its last known use to the author being on weekend runs to Canberra from Sydney during November and December 1976.

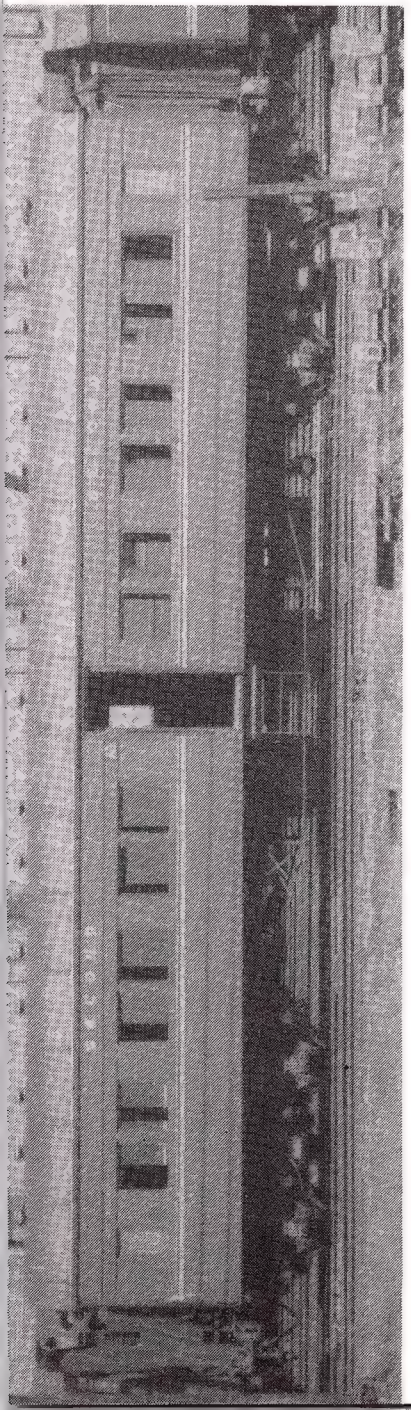


As initially introduced, the FG coach was covered in matchboard siding. Photo by courtesy of the NSW Public Transport Commission.

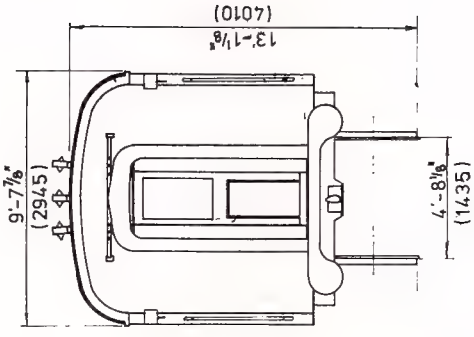


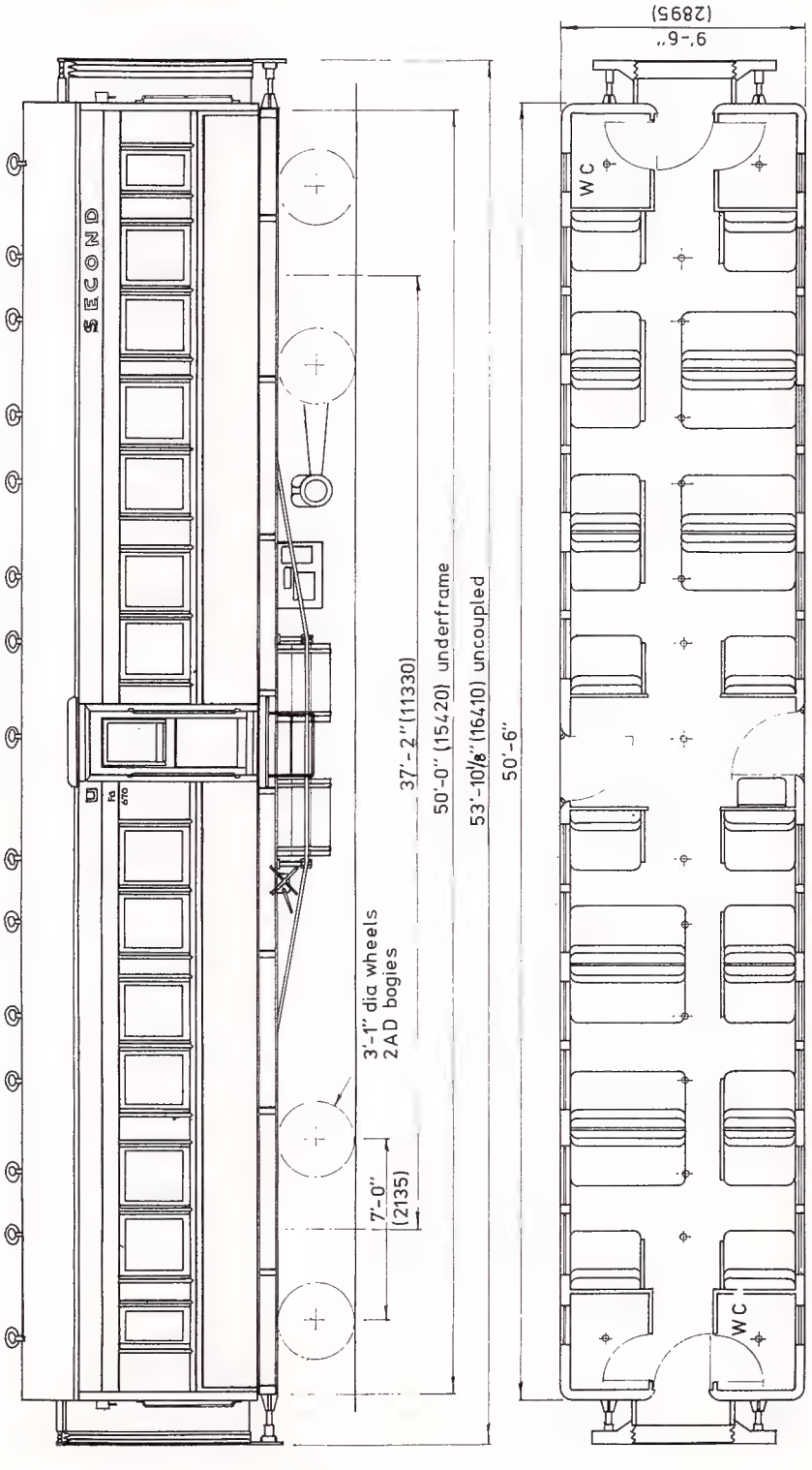
UNDERFLOOR LAYOUT OF 'FG' COACH.
Scale: Half 'HO'

TYPE:— 50'6" Tourist type coach.
CODE:— FG
No.'s:— 648, 659, 662, 670, 675, 689.
INTRODUCED:— 1942
BUILDER:— Railway Shops.
CONVERTED FROM:— BKG Horsebox.



The photgraph of FG 662 illustrates the FG coach with the refurbished plain cladded side. Bob Gallagher photo.





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2. Department of Railways, NSW, 'Composition and Marshalling of Express, Mail and Country Passenger Trains' departing from and arriving at Sydney (Commencing June 21, 1964); p. 98.
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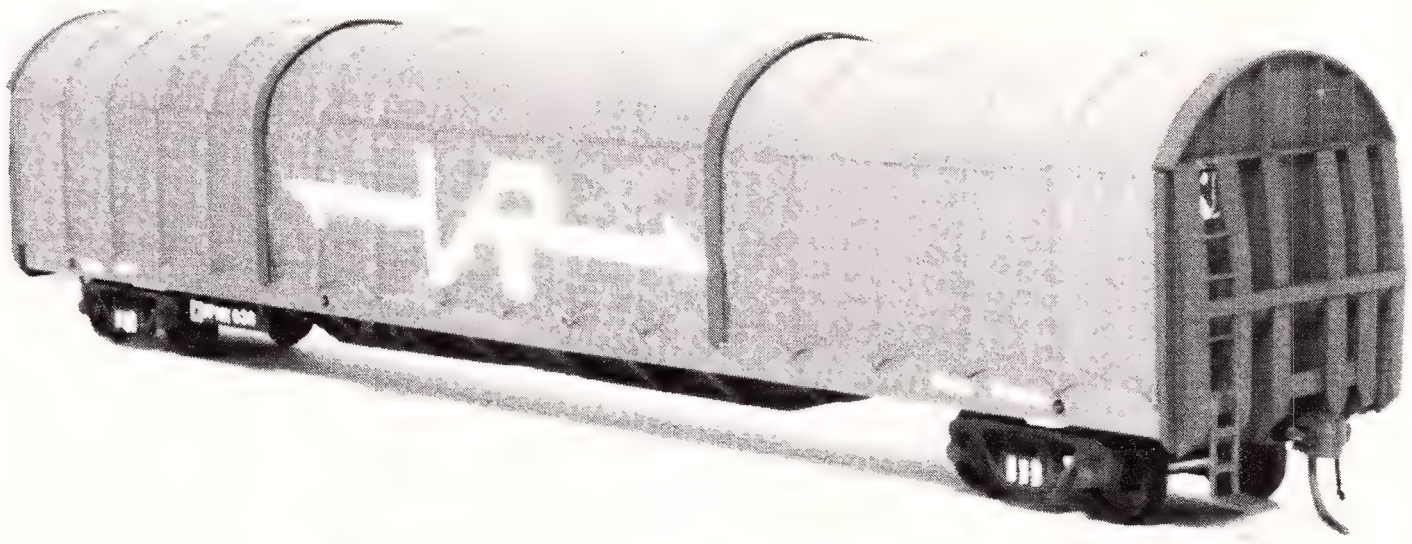
5. PTC of NSW Coaching Stock Alterations: Accounting Period 14.10.1979-10.11.1979.

Acknowledgements:

Acknowledgements are directed to Mr J. H. Forsyth, Archives Officer, Public Transport Commission of New South Wales, and his staff, for the assistance given in connection with information on the FG coaches.



KIT BASH a VFNX

Converting a Lima/Jouef Prairie Wagon into a VR VFNX covered wagon. As described By Peter Gibbs.

The VFNX covered wagon is one of the more distinctive pieces of rolling stock on Victorian railways, and the relatively simple kitbashing project we are about to explain provides an equally distinctive and attractive model.

Lima last year introduced an Australianised HO scale version of the popular French designed and operated prairie wagon to the Australian market. The changes, consisting of a new paint scheme and VR logo to approximate the VFNX, may be sufficient for many modellers. However for those who are interested in a more accurate representation, like me, then the following kitbash article will provide you with a very pleasing model.

List of materials

1 Lima or Jouef covered wagon. (Model nos. Lima 302863, Jouef 6752)
2 Roundhouse Modern Roller Bearing bo gies
Kadee couplers
Brass ladder stock or BGB's VR shunters steps
1 24" brake wheel
Plastic strip in 0.010" and 0.020" thicknesses
2 Expandet ⅜" (5mm) plastic wall plugs
2 8ba x ¼" screws

Construction

Bring in Whelan the Wrecker (HO size of course), and remove bogies, underframe (and weight if fitted), buffers, and all detail on underside of each chassis sill with the exception of the wagon ID plate (LH end each side) and the load compensation/grade controls.

Remove all detail from each end, including shunters steps and buffer pockets. File and sand smooth.

Ends

The end bracing of the VFNX wagon is most distinctive and with a little careful work our model representation will also look first class. From 0.020" plastic strip prepare 12 end braces, 8' x 8" wide. Now mark 2'6" from one end and the midpoint of that end (ie, 4"). Angle cut between your two measurements. Repeat with other eleven end braces. Measure 1' up from the other end of each brace, then cut 45 degree angle to the bottom, on the same side as your previous cut. You are left with vertical braces with one straight edge and the other edge tapering at each end. Six braces are then cemented vertically to each end. The outside braces are placed 3" from each extremity, a further two 1'9" from each side, and the two centre braces 2' apart.

Cut two 4" wide strips of 0.020" plastic 10' long and cement edgewise across the top of the end braces. (Check measurement 8' from bottom). Cut four further 4" wide strips for each end and again cement edgewise, vertically, and directly on top of four inner end braces. Trim length so that they are flush with the roof bow. Now cement a 9" wide strip of 0.020" over the roof bow of sufficient length so that it finishes in line with the tops of the end braces. Ensure strip is flush with inside of end top and covers the tops of the 4" vertical braces.

Measure and cut 12 pieces of 0.010" strip, 9" wide x 7'6" long. Angle cut bottoms as per prototype photos. Now cement to centre of each end brace to form a T. Top of each brace should just touch 4" wide cross piece resting on top of end braces. Set aside to dry thoroughly. Finally cut 6" strip 0.010" 10' wide and glue across end braces 5' from bottom.

Shunters steps and handles

Prepare two shunters steps from brass ladder stock or BGB shunters steps kit. If using brass ladder stock, cut at each fifth rung, snip off last rung at one end but leave rails intact. Then with fine nosed pliers, bend ladder to 90 degree angle at second rung from bottom. Cut out 1' square of 0.010" plastic and cement to step using Super Glue or similar. Attach shunters steps to left hand pair of end braces on each end. Ensure step hangs at least 18" below bottom of end.

Now using fine gauge wire cement four additional rungs 1'6" wide to LH end braces directly above shunters steps and equidistant from each other.

Brake wheel

Attach 24" brake wheel to a short length of wire. Drill appropriate hole in one end only, 2'6" up from bottom and between the 2nd and 3rd braces from the left. Insert wheel and cement, but leaving wheel slightly proud of the braces.

Coupler pocket

File out a 2' wide coupler pocket from each end approximately 1' deep, or deep enough to accommodate a Kadee coupler box attached directly to the underside of the chassis.

I found that by fitting the coupler box directly to the completed underframe correct coupler height was achieved without any further adjustment. Adjustments, if needed, can be made by trimming the bogie bolster. (See below).

Underframe

You should have already removed the underframe from the chassis at the beginning of this project, but if not, unscrew the retaining screws and prise underframe from its retaining lugs.

To make the model underframe look more like the VFNX fishbelly frame it is necessary to cover up that see-through look between the angled bracing. Cut out two pieces of 0.020" plastic sheet 35' long by 1'6" deep. Measure 5'6" in from each end and angle cut to a corner of each end. This should leave you with a shorter side measuring 24'. Test fit into underframe on outside of what look like teeth. You may have to remove some material to get a snug fit against the bottom rail. When satisfied glue together.

Cut about 18" of the 5mm wall plug and cement into each bogie bolster screw hole.

VFNX PROTOTYPE NOTES

In 1977 SFX100 was rebuilt as VFLX100, which became the prototype for the VFNX newsprint wagons.

The 50 wagons in the VFNX class were all constructed during 1979, with the last being completed by August of that year.

Newsprint traffic from Maryvale to Montague was the prime reason for the introduction of the wagons. Approximately one quarter of the vehicles are used for that purpose. The balance are used for freight centre traffic throughout the state.

Standard fittings for the wagons include green tarpaulins with a white VF logo on the centre section. Two vehicles 011 and 050 are fitted with experimental yellow plasticised tarpaulins. A black logo is used in place of the standard white one.

The prototype wagon, VFLX100, was placed in storage in May 1979, and remained there until May 1980 when it was converted to VFMX113 for pyneboard traffic.

Peter Vincent

Test fit set of Roundhouse modern roller bearing bogies to wall plug, and check coupler height. Trim wall plug if necessary. You will note from photographs that the bogies on the VFNX sit very close to the chassis underframe, so make sure you do not have the model sitting too high on its bogies.

Cover frame

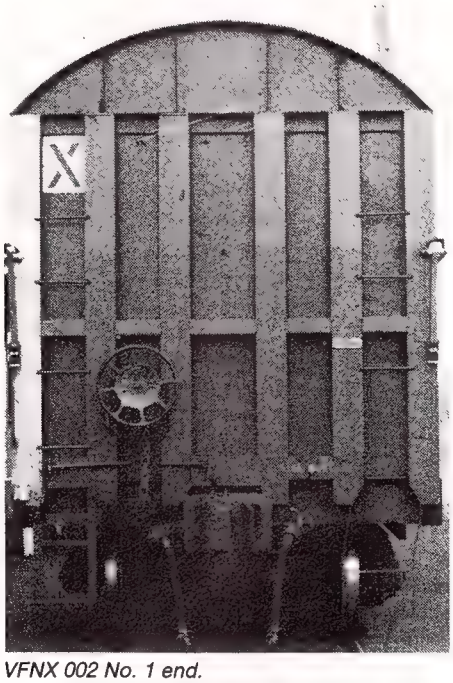
File flat the fifth rib in from each end of the cover. Make up two additional cover frame pieces by cementing two 9" wide strips of 0.020" in place of the just filed away ribs.

Painting and detailing

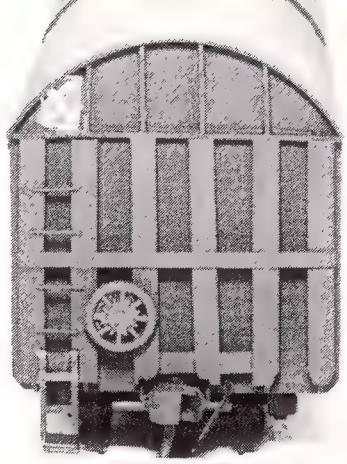
Remove cover from body and bogies if fitted. Spray entire body with your favourite shade of VR Tuscan red. (I use Floquil Caboose Red and nobody's complained yet). Spray or brush tarpaulin cover with some sort of olive green to your own taste. I used one of the paler olive colours from the Humbrol Military Colours series. Hand paint the two new cover frames either VR red or aluminium. The latter looks particularly effective.

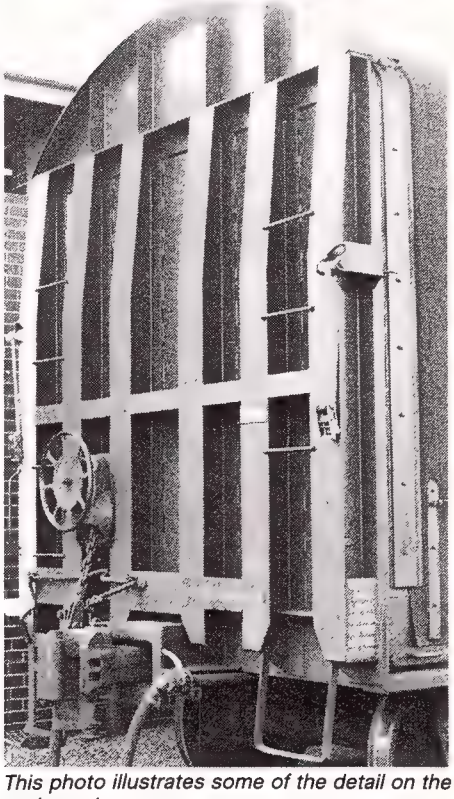
From your favourite decal set select two large white VR logos which go on either side of the cover between the new cover frames. Add roller bearing decals above each bogie, and an exchange "X" in the top left hand corner of each end. Paint wagon ID plate on either side black and affix wagon code and number. I find decals that small incredibly fiddly, so I used dry transfers — Letraset Helvetica Medium 6pt.

After a final coat of dullcoat over all the decals and transfers, fit couplers, bogies (also painted VR Tuscan red) and air hoses, and there you have it, a very smartly turned out VFNX.



VFNX 002 No. 1 end.

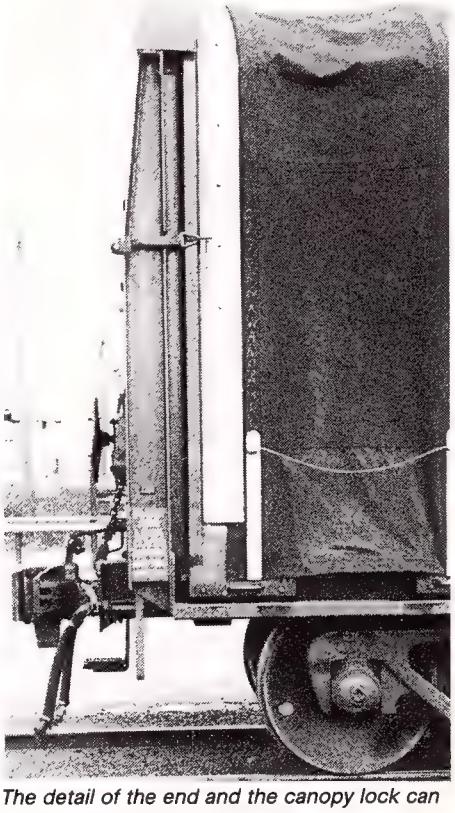




This photo illustrates some of the detail on the end panels.

Three quarter view of No. 1 end and No. 2 side of VFNX 002. Both sides are similar.

Three quarter view of the No. 2 side of VFNX 017. All prototype photographs by Peter Vincent.



The detail of the end and the canopy lock can be seen on this photo.

Building a Brass C36 Loco — with Automatic-Reversing Valve Gear

by D. G. Hoskins A.S.T.C. (Mech. Eng. Hons.)

During the building of a brass D55 Loco ("Katie" — as described in A.M.R.M. May-June 1978) the writer had successfully modified the 'Southern' valve gear so that it could be reversed, by manipulating a knurled nut located in the cab. In practice, this was not very impressive, as it is well nigh impossible to get at the nut to manipulate it.

Thoughts were then directed to the possibility of building a fully-reversible Walschaert valve gear. The C36 was selected as a suitable subject for the H.O. scale mostly N.S.W. layout.

At the outset, it was realised that the space for the weigh-shaft and reversing mechanism would be very limited. In the development of the design, the following measures were adopted: —

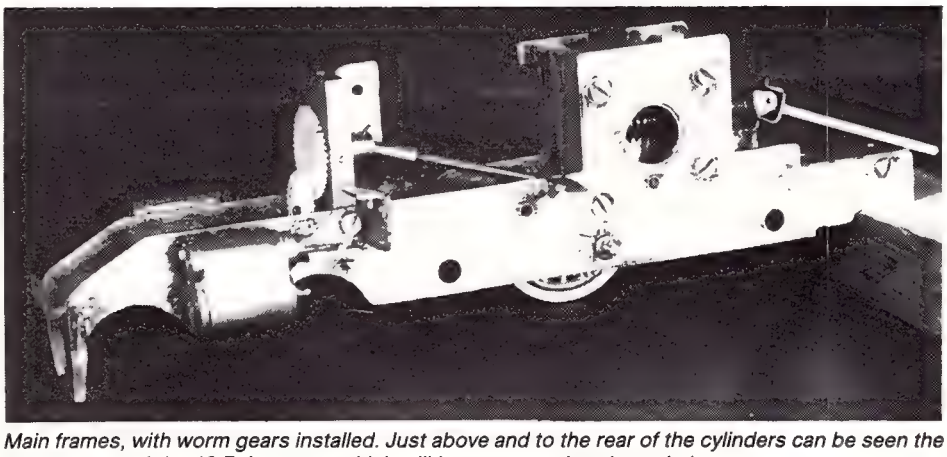
(1) thickness of main frames to be limited to 0.8 mm. (1/32");
(2) traction motor to be located in the tender (additionally, allowing the use of a larger motor);
(3) use of a countershaft and "reverse worm gear", to allow gearing to be mounted further away from the vital area;
(4) drive shaft to be horizontal, with universal joints mounted directly over the rear driving axle and the front tender-bogie pivot pin.

It was also decided to reduce soldering to a minimum, so that the model could be readily dismantled for servicing or repair.

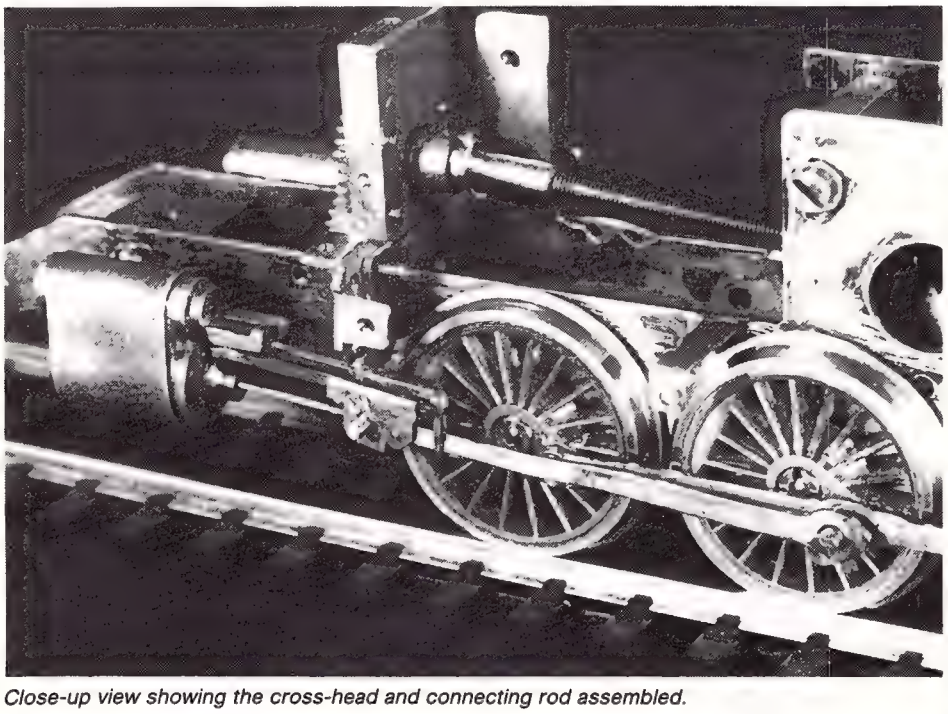
Detailed large-scale sketches were prepared (based on the excellent "Data Sheet" produced by Greg Edwards. Also see A.M.R.M. September-October 1979 for excellent photographs). To provide more clearance for the weigh-shaft, and for the flanges of the Romford drivers, the centre driving axle was moved 1.5 mm. to the rear. Otherwise (apart from a small reduction in the diameter of the loco bogie wheels) scale dimensions have been maintained.

As the design progressed, a method was devised for equipping the valve gear with power-shift, and after a little more thought, it was realised that with the right combination of diodes, the power-shift could be made automatic.

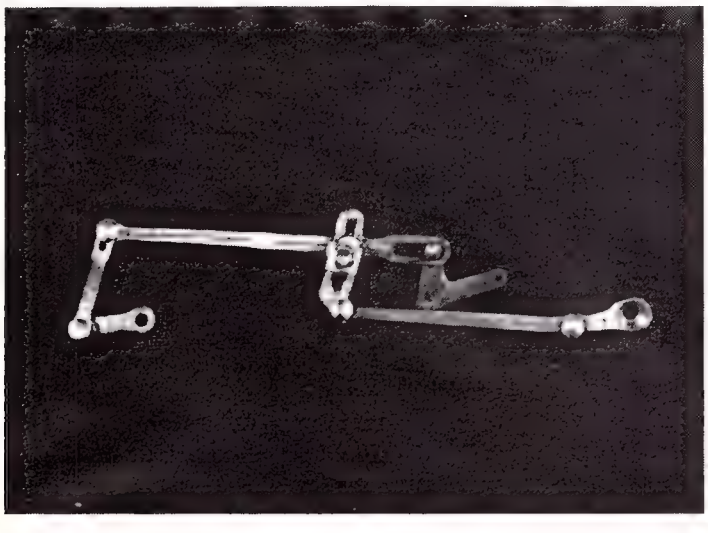
The power-shift consists essentially of a



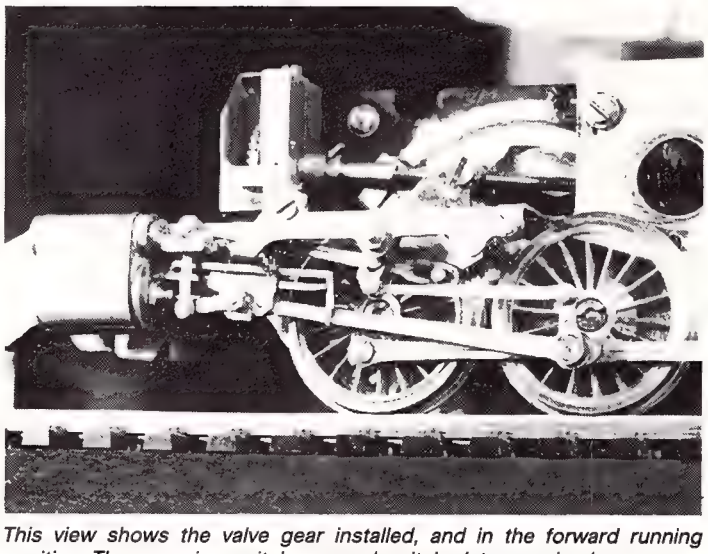
Main frames, with worm gears installed. Just above and to the rear of the cylinders can be seen the spur gears and the 10 B.A. screw, which will be connected to the switch-arm.



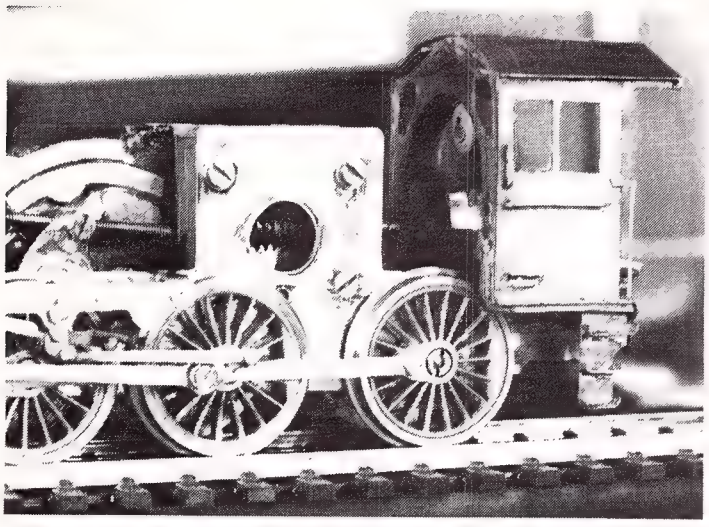
Close-up view showing the cross-head and connecting rod assembled.



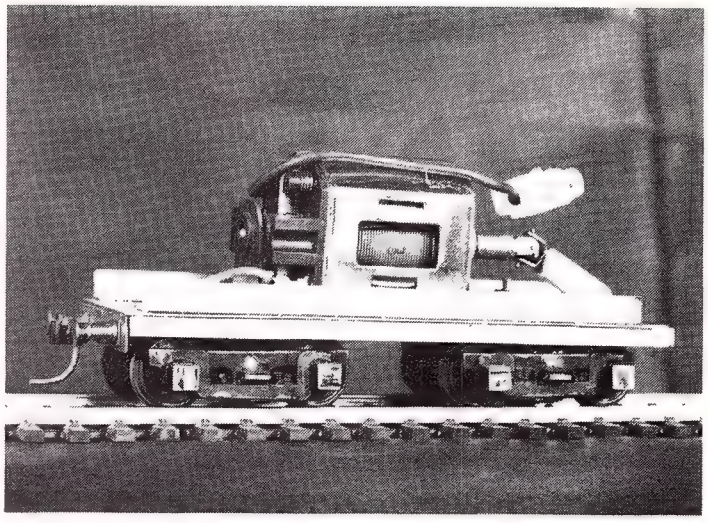
The left-hand side valve gear linkage assembled ready for installation.



This view shows the valve gear installed, and in the forward running position. The reversing switch-arm and switch plate can also be seen.



The cab mounted in position. The worm wheel (mounted on a counter-shaft) can be seen through the inspection hole.



The tender chassis, showing the equalised bogies, motor and all-metal universal joint.

switch-arm radially mounted on the weigh-shaft, moved back and forth by a small motor concealed in the smoke-box. In order to achieve a realistic few-seconds operation time for the reversal, the power-shift motor drives a 10 B.A. screw mechanism through a 12 to 1 reduction gear.

The diodes operate so that the main traction motor will not start unless the valve gear is in the correct position. If not in correct position, the power-shift motor will operate to reverse the valve gear. As the switch-arm nears the end of its stroke, the current is switched on to the traction motor. For a moment both motors are on line (which is in fact a 'bonus' feature, minimising any sudden jerk due to the traction motor coming on line with too great a voltage). As the power-shift completes its stroke, it switches itself off. If the valve gear is already in the correct position, the traction motor will start immediately in the normal fashion.

In practice, it was found that the load on the power-shift was so light that it would start easily on very little voltage, so that no jerking is evident. The mechanism has been well tested on both electronic and conventional throttles, and no undesirable effects have been noticed. Directional lighting can be provided by connecting to the appropriate diode.

The boiler shell was designed to be fully open on the under-side, so that it can be slid into place end-wise. To improve its rigidity, the centre section was machined from solid brass. The front end fits inside the smoke-box (also machined from solid brass) while the rear end fits into the "spec. plate".

Pick-up is from the driving wheels on one side (and thus to the switch-arm which is in electrical contact with the main frames) and the tender wheels on the other. The circuitry necessitates complete insulation between the loco and the tender.

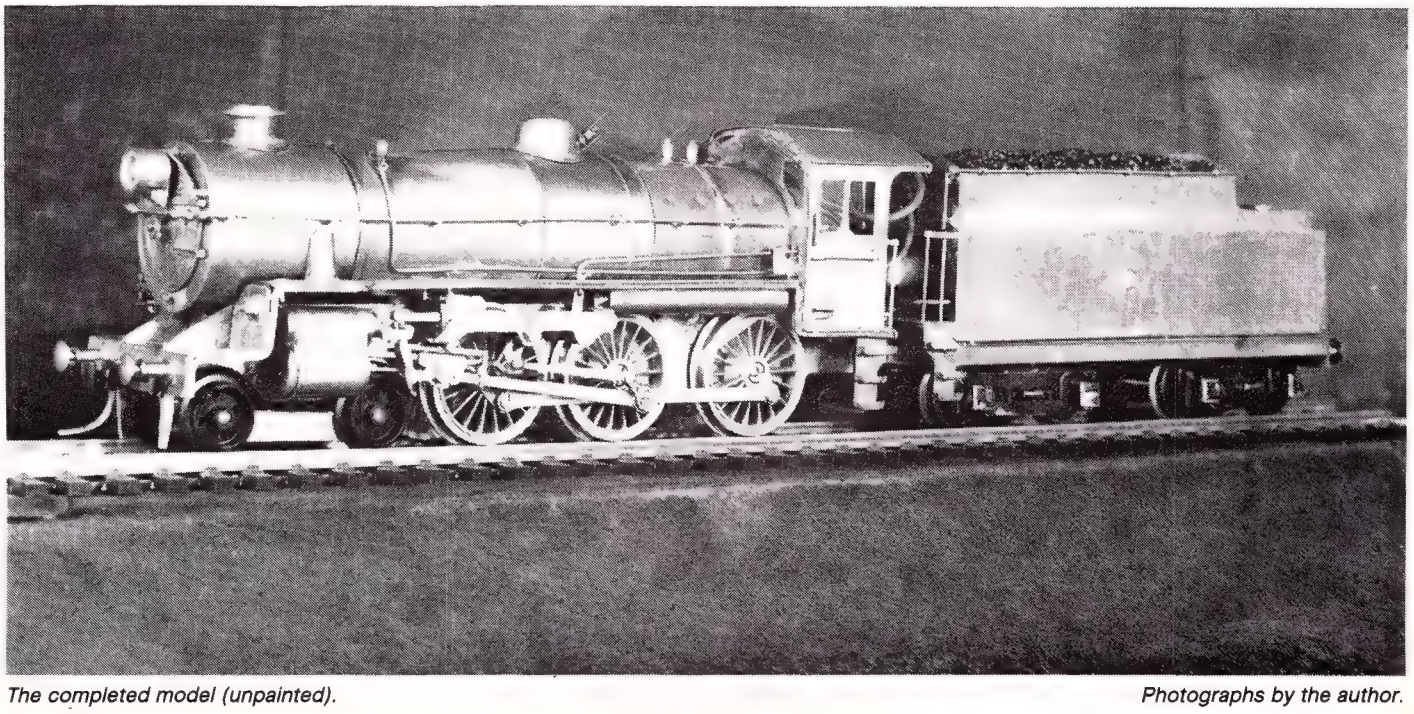
One production problem that had to be overcome was the making of the slots in the valve gear parts. These were required to be about 0.75 mm. (0.030") wide, which is too small to be made by drilling and filing. The problem was solved by using an old heavy-duty stapling machine, fitted with a home-made square punch and die of that size.

The minimum radius on which the model will run is a fairly large 500 mm. (20") approx. This is mainly because there is very little side-play in the driving wheels, in order to provide maximum clearance between the frames to accommodate the power-shift gear, and to prevent parts of the valve gear from fouling each other.

About a year of spare time was spent on the design and construction. Like all first-off jobs, there are a number of improvements that could be made if one were doing it again. Some of these are: —

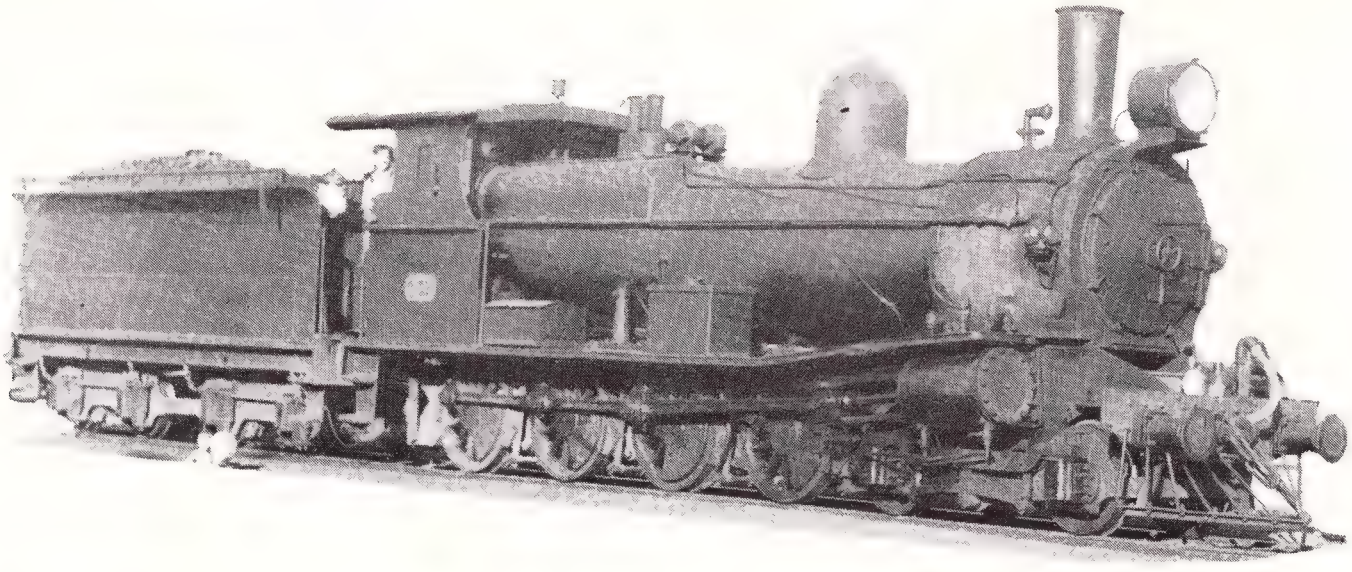
- the model is noisy; foam lining of the tender body would no doubt improve this. The metal universal joints also contribute; perhaps plastic or rubber tube would be better.
- the electronics were not studied closely. Constant brightness lighting would be a desirable feature.
- the reversing switch-plate may have been more easily made, and more compact, if printed circuit board were used.
- the fit of the driving axles in the frames is probably too good, so that the pick-up wheels do not follow every irregularity in the track. A sketch has been prepared of an arrangement to slot the holes for the front and rear axles slightly, and provide springs to keep the wheels on the track.
- the power-shift drive was made up with gears salvaged from a discarded bedside clock, and a small 12-volt motor of a type which is no longer procurable. A modified design is already being prepared, using items that are readily procurable.

When the above details have been settled, it is planned to market full sets of large-scale detail drawings and instructions for building the model. These are nearly complete, and will be advertised through A.M.R.M. as soon as available.



The completed model (unpainted).

Photographs by the author.



PROTOTYPE PLAN

T.G.R. T Class 4-8-0 Locomotive

by Michael Dix

In the years immediately following World War I the Tasmanian Government Railways were operating with a fleet of small, and in some cases obsolete locomotives. The most powerful engines in service were three classes of Beyer Peacock built locomotives; the E-class 4-6-0, L-class 2-6-2 + 2-6-2 garratts and the M-class 4-4-2 + 4-4-2 garratts — a total of six engines. The bulk of the locomotive fleet comprised the small A, B, C and CC classes, plus a number of locomotives inherited from the Tasmanian Main Line Railway Company.

Although approval had been given for the purchase of new locomotives from England, the cost of imported locomotives in the immediate post-war period was such that six goods and four passenger locomotives were eventually ordered from Perry Engineering of South Australia in 1919-1920. To assist in the short term, the TGR purchased two T-class locomotives from the South Australian Railways. These locomotives (T219 and T235) were placed in service in March 1921, and were followed later in 1921 by a further four (T222, T223, T230, T237).

MODIFICATIONS

Before entering service in Tasmania, the locomotives were modified to make them compatible with the standard Tasmanian stock. The centre couplers were replaced by three link couplings and buffers, and vacuum brakes replaced the air brakes. Other modifications included the fitting of large sandboxes on the running boards, and dump grates and ash pans to the firebox. The locomotives retained their South Australian numbers and class designation.

Between 1927 and 1931, the original saturated boilers were replaced by superheated boilers. The lipped stack was replaced by a flared stack, and the addition of electric headlights, marker lights and turbo-generators considerably altered their appearance. The boiler pressure of the superheated locomotives was decreased from 185 to 175 lbs per square inch.

The locomotives ran in this form until withdrawn. Because of the locomotive shortages during and after World War II, and the influx of a large number of new locomotives in the early 1950's, the Tasmanian locomotives were not upgraded and modernised, as were their South Australian counterparts, although numerous small mechanical modifications were made during overhauls or when under repair. The Tasmanian locomotives retained their small tenders, bar cowcatchers, and simple lines, and consequently their appearance differed markedly from the more cluttered and bulky-looking South Australian locomotives.

The locomotives were painted black throughout their life and retained the original numberplates on the cab sides. The class letter was originally carried on the stack, but was not retained after the superheating modifications.

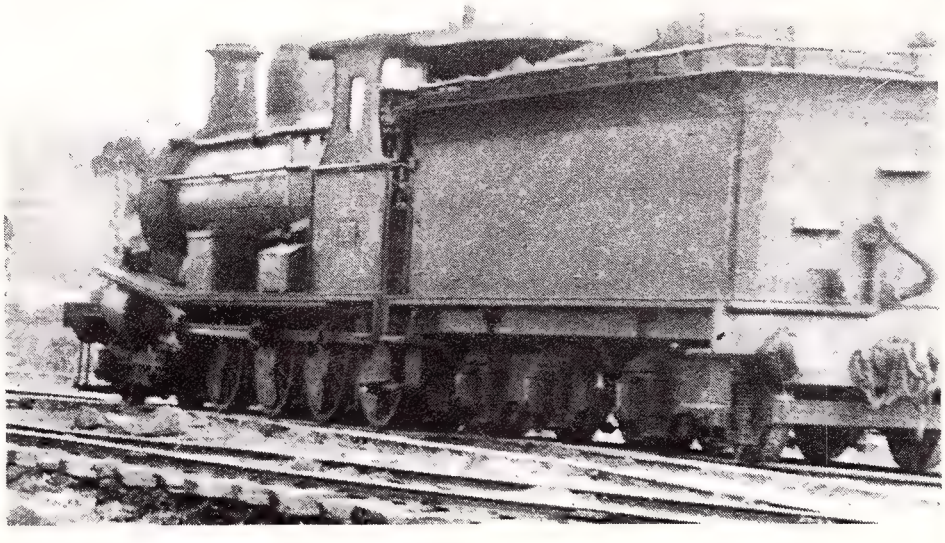
Operation

The T-class locomotives were mainly employed on secondary goods and mixed trains working out of Launceston and Devonport, although they did work passenger trains when required. Because of their relatively small maximum axle load, the T-class locomotives were available for use over all but the more lightly laid branch lines, which remained the domain of the smaller Beyer Peacock locomotives. Their total wheelbase length of 46'½" exceeded the 45'6" turntables available on most branch lines, so the T was further restricted to lines where larger turntables or triangles were available. The turntable at St Marys was lengthened to 49' to allow the T-class to work the Fingal line coal traffic, until bridge strengthening, track relaying, and the provision of a triangle at Cullenswood allowed the Q-class locomotives to work to St Marys about 1930.

The first six Q-class 4-8-2's and the four R-class 4-6-2's were delivered in 1922-23 and relegated the older locomotives to secondary duties. However the axle load of the new engines restricted them to the more heavily laid sections of the system, and consequently the T-class locomotives were still running 18,000 to 24,000 miles each in the years preceding the war. During this period, the number of Q-class

Top: Fireman's side of T237. Locomotive has been superheated. Photo: ANR (Tasmanian Region).

Right: T237 was stranded at Avoca after the floods of April 1929. This photo shows the locomotive in original condition, with the lipped stack evident, complete with the letter T on the rear side. Photo: A. Parnell collection.



locomotives was increased to 15, and their route availability considerably widened. However the north-eastern line continued to be restricted to the smaller locomotives, particularly the T- and E-classes, a situation which lasted until the mid-1950's.

The delivery of several diesel and steam railcars during the 1930's decreased the number of locomotive-hauled passenger and mixed trains, further restricting the operation of the T-class. However the general increase in goods traffic, together with heavy war-time traffic and locomotive shortages, provided sufficient work to maintain all six locomotives in traffic.

Decline of Use

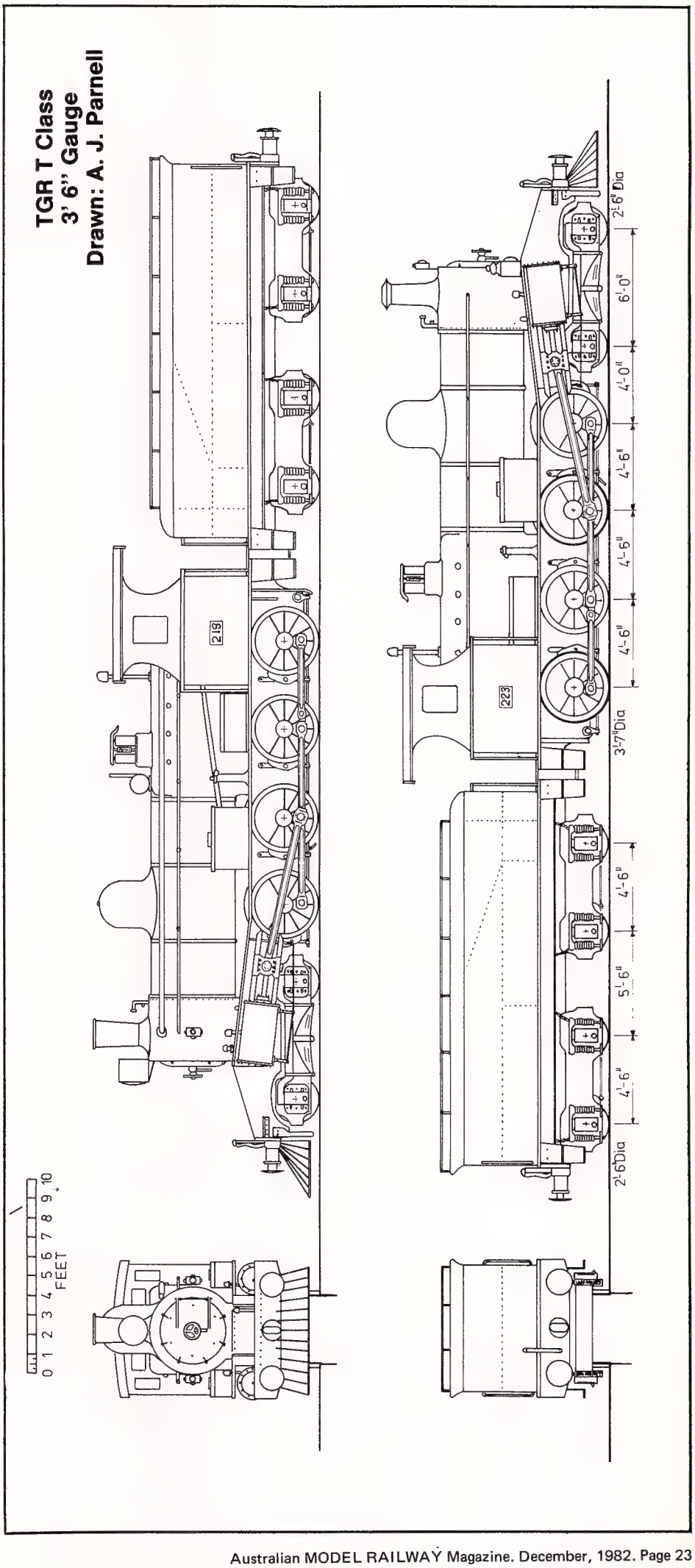
The years 1939-1950 saw a large influx of locomotives onto the Tasmanian railway system. Four additional Q-class locomotives and 14 Australian Standard Garratts became available for goods traffic, eight DS-class tanks for suburban and some branch line traffic, and four F-class for light traffic. An additional eight diesel railcars and four V-class diesel shunters were also delivered. This allowed some of the older and smaller Beyer Peacock locomotives to be withdrawn but all the T-class remained in service, running between 19,000 and 23,000 miles each per year. All six of the locomotives received general overhauls between December 1949 and November 1951, with T237 being reboilered.

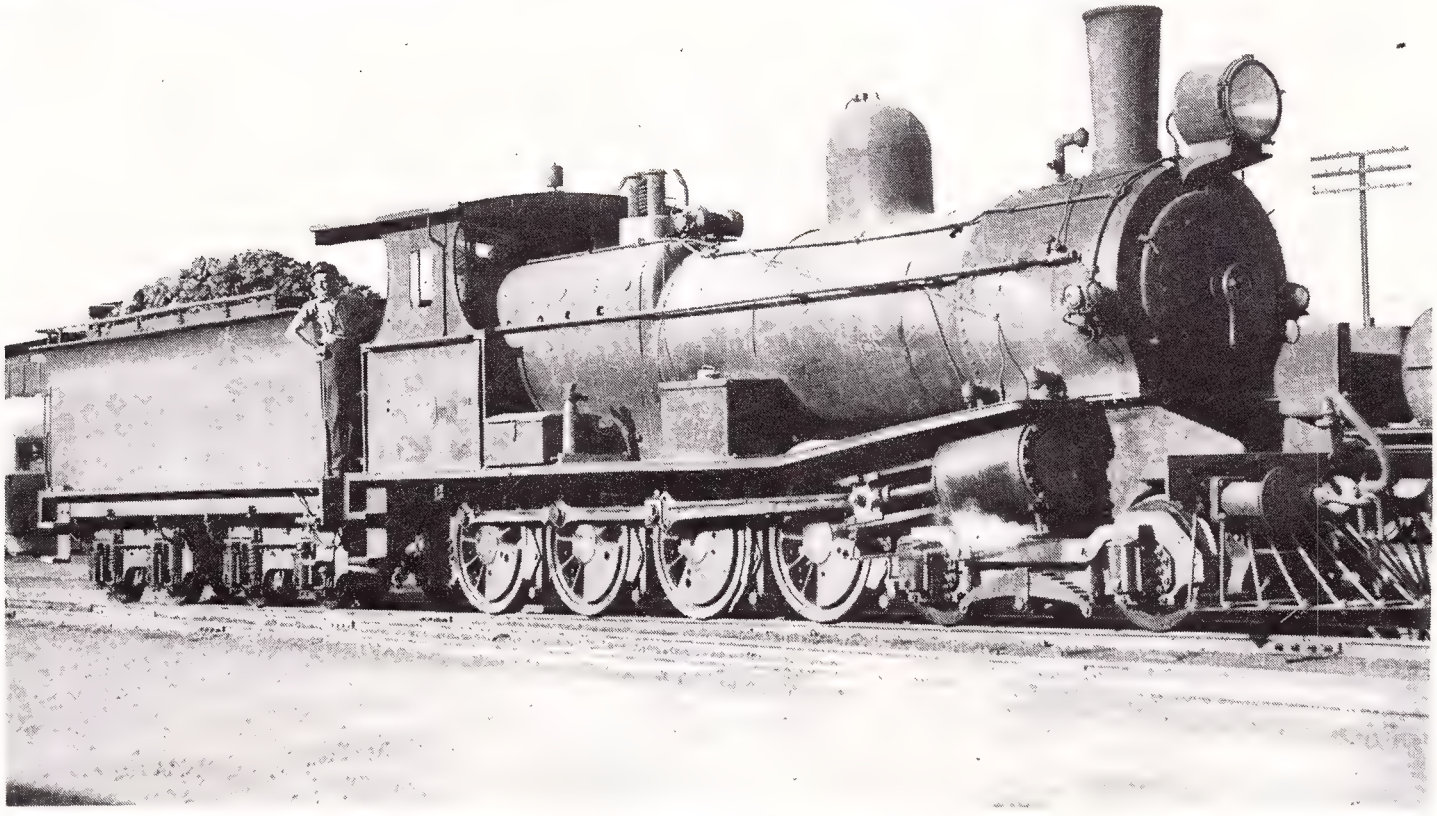
In 1950-51 the first twelve X-class diesel-electric locomotives were placed in service, together with a further three diesel railcars. Although a further nine X-class, two V-class shunters, eight H-class heavy steam and eight M-class light steam locomotives entered service in 1951-52, followed by the remaining eleven X- and two M-class in 1952-53, all six T-class locomotives remained in service, but the average mileage run by the loco declined from 21,600 in 1950-51, to 16,800 (1951-52) and 9,600 in 1952-53. This decline stabilised at about 6,000-7,000 miles per engine per year between 1953 and 1957. Overhauls of the class continued up to 1957, with three locomotives (222, 235, 237) being overhauled in that year. T219 and T230 received their last overhauls in 1954, while T223 was last overhauled in 1952.

The reorganisation of train schedules in 1957, making more efficient use of the diesel-electric locomotives, plus the conversion of four M-class pacifics to MA-class for goods working, and the closure of the Roland branch, resulted in the first of the T-class locomotives becoming surplus to requirements. T219 was written off on 16.8.1957 and its boiler transferred to T222. T223 and T230 were withdrawn late in 1957 and written off in 1958. The remaining three engines ran 15,600 miles in 1958-59, but were confined to shunting, banking, or local goods working. T222 and T235 worked out of Devonport, with T237 working from Launceston. A diesel shunter replaced T222 in 1959, while T237 was withdrawn in September 1959, both locomotives being officially written off in April 1960. The last locomotive, T235, remained in service at Devonport, running 270 miles in eleven days in 1961-62 before being withdrawn late in 1961. Scrapping of the locomotives began with T219 and T223 in 1958, T230 in 1959, and T222 and T237 in 1962. T235 was partially dismantled in 1963 and scrapped in 1965.

References

Some information on T-class locomotives has previously been published, and much of this has been used in the compilation of this article. The three major published sources used were an article by H. J. W. Stokes [The decline of steam power on the Tasmanian Government Railways 1945-1965; Part I (Australian Railways Historical Society Bulletin 347: 193-202) and Part II (Australian Railways Historical Society Bulletin 348: 217-219)], 'Locomotives





Above: T219 at Launceston loco. This photo shows the locomotive after the superheating modification; the flared stack, headlight, and simple lines are evident. Photo: ANR (Tasmanian Region).

Table 1. Service details of T-class Locomotives

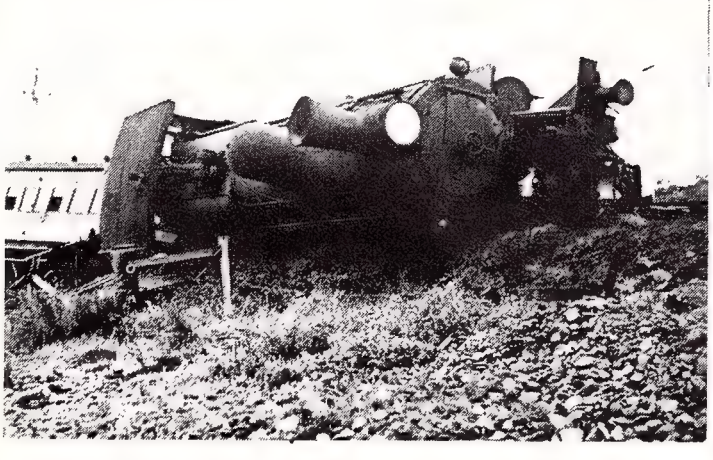
Locomotive	*In service S.A.R.*	*S.A.R. mileage*	*In service T.G.R.*	*Superheated*	*Withdrawn*	*Written off*
T219	13. 5.1914	101 258	3.3.1921	26. 9.1931	5.57	16.8.1957
T222	19. 5.1914	111 417	1921	15. 8.1928	4.59	26.4.1960
T223	9. 6.1914	104 630	1921	20.12.1929	10.57	2.5.1958
T230	11. 8.1914	99 000	1921	23. 4.1931	12.57	17.9.1958
T235	8. 9.1914	100 521	3.3.1921	10.10.1927	9.61	26.8.1963
T237	5.10.1914	111 032	1921	30. 9.1930	9.59	26.4.1960

of Australia' by Leon Oberg (1975, A. H. & A. W. Reed: Sydney), and the annual reports of the Tasmanian Government Railways (up to 1938) and the Transport Commission (from 1939), published in Parliamentary Papers of Tasmania.

Table 2. Operating statistics of T-class Locomotives, 1948-1964

Year ended	*Steam locos on roster*	*Diesel locos on roster*	*T-class on roster*	*T-class in use during year*	*Total miles*	*Average miles*	*Average days used*
30.6.48	107	0	6	6	140 460	23 410	—
30.6.49	112	4	6	6	143 280	23 880	—
30.6.50	108	4	6	6	117 444	19 574	—
30.6.51	108	16	6	6	129 624	21 604	—
30.6.52	111	27	6	6	101 220	16 870	—
30.6.53	102	38	6	6	57 480	9 580	—
30.6.54	101	38	6	6	37 176	6 196	—
30.6.55	101	40	6	6	38 748	6 458	—
30.6.56	91	40	6	6	37 860	6 310	113
30.6.57	90	40	6	5	35 675	7 135	122
30.6.58	81	41	4	5	23 412	4 682	102
30.6.59	68	43	3	3	15 591	5 197	144
30.6.60	57	49	1	1	n.a.	n.a.	—
30.6.61	57	49	1	1	n.a.	n.a.	—
30.6.62	51	52	1	1	270	270	11
30.6.63	46	54	1	0	0	0	0
30.6.64	26	55	0	0	0	0	0

Below: A superheated T class locomotive derailed at Doctors Rocks, near Wynyard, December 1934, and the underside of the T class. The position of the vacuum brake cylinder between the frames is clearly shown. Photos: A. Parnell collection.



SCRATCHBUILD AN SAR 4400 CLASS COMPOSITE BRAKE VAN

I built an HO scale model of a 4400 Composite Brake using a technique of laminated card and sheetwood with some styrene detail parts in places.

ROSS HURLEY

This is not a one evening project but as no part of its construction was especially difficult it could be built as someone's first effort in scratchbuilding. The use of card, wood and styrene in the one model also give the beginner a feel for each and hence some experience on which to base the choice of construction materials for his next model.

So, here we go. It is the dreaded blow-by-blow method of description I am afraid. For those modellers who follow instructions by ignoring them, however, I point out the copious diagrams appended. And we'll leave them to sort the project out in their own way and expect not to hear another word from them for the rest of the article.

First, look at fig. 1 for a clearer idea of the laminated method of assembly. Notice the layers that make up each side.

Sides

1. Step 1 is to mark out the sides, including the batten locations, on the card. Bristol board would be the sort of thing to suggest here but I just used some good quality 0.25mm illustration board. A near shiny surface on both sides is desirable.
2. Cut out the window areas with a sharp, pointed, single edged razor blade. The windows in the passenger compartment and the double freight door windows are cut out as one big area each. Note that the lavatory on one side means that the window arrangement is not the same both sides.

For best control on the somewhat easily damaged card push the blade of your razor through its backing a bit and snap off part with pliers to produce an acute angled point. Such a blade is a useful adjunct to the X-Acto number 11 blade more commonly used. Use it whenever a very sharp clear cut is required. And when the point gets blunt just push the blade through the backing a little more and snap off again.

3. Cut the sides out to length and height.
4. Lay the sides over the 0.8mm (1/32") Northeastern sheetwood. This will form the subsides. Mark the wood through the window openings, and all around each side with a sharp pencil. Northeastern wood is obtainable from McBees or The Model Dockyard.
5. Cut the sub-sides exactly the same as the sides except the bottom which is a measured nine scale inches longer. That will represent the solebar when everything is laminated together. The window areas are cut out to match too.
6. Mark and cut out the panel that runs along the top of the sides from 0.25mm card. Glue it to the sides with a PVA glue (Aquadhere, etc.) so that the bottom edge is in line with the top edge of the window openings. Set aside to dry under flat weights.

Windows — 1

While the top panels are drying we can prepare the window glazing. I used some 0.4mm (0.015") clear acetate. Choose a piece that is perfectly clear with no scratches or other imperfections on it, and 0.4 to 0.5mm thick. Thinner material will bow later and will not have the flat look of glass. Slaters make a clear acetate sheet and Walthers a clear sheet of styrene.

The method I will outline produces windows that are a scale depth in from the outside face of the car and have a recessed window frame inside the openings.

7. Stick adhesive labels onto the acetate over the full area where the windows will be. The label material to use is that which peels off a wax paper base to stick on file covers, books, etc. It is available in various sizes from stationery suppliers.

The idea is that we will paint the strips and when dry score a line around the actual glass area of each window. The glazing strips will be sandwiched between the sides and sub-sides. When the model has been finished and painted we will peel off the square over the glass area, leaving a clear window inside a narrow, painted, window frame.

On my model I actually used Sellotape cellulose tape, a product I have used successfully many times before. This time however I must have left it on too long before pulling it off as it left some glue residue. I used adhesive label on the end window and it peeled away more easily and as clean as a whistle.

8. Once the label strips have been stuck onto the acetate, paint them all over with the final body colour and set aside to dry.
9. While the paint is out colour the edges of the window openings in the wood sub-sides.

Battens

10. Attach the first layer of battens to the card sides. I used Evergreen styrene strips. Scale HO 3" × 1" strips were used at the passenger compartment end, except the one nearest the end platform, and 2" × 1" strips elsewhere. The two inch ones are oversize I found out later. The prototype used ½" × ¾" half round battens. If I were to do it over again I would use something thinner; perhaps the finest styrene rodding in Slaters' range. They would be sanded down a bit after the cement had hardened. A styrene side would be necessary as the card would be damaged too easily in the sanding operation.

The second layer of battens is a layer of 3" strips over the first 3" ones but leave these off for now.

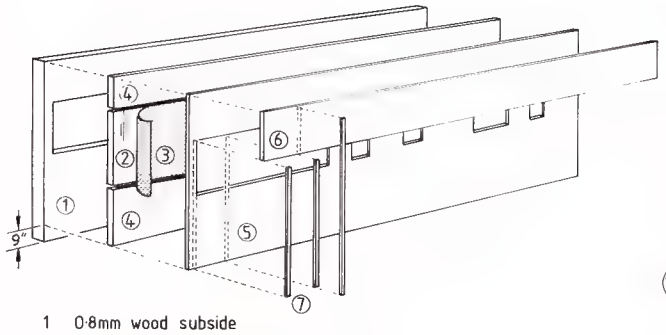
Use methyl ethyl ketone (MEK), or equivalent liquid cement, for attaching styrene to the card. For a couple of years now I have used Britfix Poly-70 in place of MEK and have found it more convenient in most operations. It is used in the same way as MEK, that is, a little painted onto the inside of the joint with a small brush. Because it is slightly thicker it does not set so fast and allows a few seconds to make final adjustments. In other cases it can be painted onto both surfaces before they are brought together; a situation in whick MEK would have dried before the pieces touched. My most infuriating battles with MEK, however, have been in the race between it evaporating from the bottle and me using it up. Evaporation always won. There is no discernible evaporation with Poly-70.

11. Turn the sides over and insert window frames of 3" strip again on the back of the battens showing through the passenger window apertures.

Windows — 2

12. Cut the prepared window glazing strips the length of the sides, and a little wider than the height of the windows. Carefully glue the strips over the backs of the window apertures in the card sides with PVA glue.
13. Add filler strips of the same thickness as your window material above and below the window strips as shown in fig. 1. In my case 0.4mm thick card sufficed. Set the sides away under weights until the glue has thoroughly set to prevent warpage.
14. The next step produces our scale window frames. With the sides right side up use a steel ruler and our pointed razor again to score

Fig. 1 LAMINATED SIDE ASSEMBLY



1 0·8mm wood subside
2 0·4mm clear styrene sheet, overlaid with –
3 Self adhesive label, producing the prepared window strip
4 0·4mm card filler pieces
5 0·25mm card side
6 0·25mm card panel above windows
7 How the battens are mounted

around the glass areas in each of the window apertures. Do it under a good light and carefully judge the cuts to be about a scale two inches inside the window openings. Make sure the corners meet but do not overshoot. Fig. 2 shows this operation. The label material is now ready to be pulled away from the glass area of each window but there is no advantage in doing it now. Leave it until the model has been finished and painted.

15. Complete the sandwich by gluing the 0.8mm wood sub-sides to the sides with PVA. Weight flat until thoroughly dry.
16. Add the second layer of 3" battens to the seven battens between the passenger compartment windows with styrene cement. Run them over the top panel right up to the roof.
17. Cement on the rails outside the passenger compartment windows. They are scale 3" × 1" styrene strip. Note that they stop short of the end window.

Floor

18. Cut the floor to shape from Northeastern milled floor stock. The length is that of the body itself, less twice the thickness of the ends — about 3.5mm. The width must have twice the thickness of the sides deducted in a similar manner.
19. Cut and glue on a 90g piece of sheet lead to the top of the floor. It should be long enough to go almost to the ends of the floor to provide a good key for the bogie and coupler screws. I glued it on with contact cement.
20. While it is still flat on the bench mark out the positions of the bogie bolsters using a machinist's square.

Ends

21. Mark and cut both ends from cardstock. Cut out the door window in the platform end. The plain end has a 9" extension at the bottom which forms the end of the underframe and I included this on my card cut-out. The edges got quite damaged during the extensive handling after assembly so I cut it off and glued a separate strip of 0.25mm styrene across the bottom. I recommend this course, so cut both end pieces the same height.
22. Glaze in the same way as the sides and glue both ends to 0.8mm sheetwood subsides, cut narrower than the card ends by 0.8mm each side. Set aside under weights to dry.

Figure 2

23. Add the required battens, letterboard and door frames with styrene.
24. The door has a recessed panel in it. If you wish to represent it cut out the door shape from draughtsmans' thick tracing paper or other dimensionally stable material. Carefully cut out the window aperture the exact size of the card window, and then a rectangle below for the recessed panel. Glue between the two door frames.

On my model I pre-planned this step and glued the panel to the door before glazing, covering the window right up with the tracing paper. Then I cut the tracing paper through the back of the window aperture.

25. For internal strength cut two bulkheads from 1.6mm (1/16") sheetwood. Clamp them together and sand the tops to a curve using the ends as templates. Cut a door in the one which will be seen through the windows in the finished model.

Assembly

We should now have both sides and ends completed, so we can assemble them to the floor.

26. Glue the floor to one side, 9" up from the bottom. Block it up square to set.
27. Now glue both ends onto the floor and side, and when they have set, the last side. Be sure each part is chocked to set square to eliminate troubles when attaching later parts.
28. Glue in the bulkheads now to prevent the sides bowing in during handling. Their position is shown on the prototype drawing as is the partitioning of the toilet which you can add now if you wish. Paint the inside of the toilet window white anyway lest you forget it until after the roof is on.
29. We will now hide the joins where the sides meet the ends. With styrene solvent cement 2" and 3" styrene strips at the corners. Put the 2" strips on the ends and the 3" strips on the sides, overlapping the 2" strips, so effectively producing 3" × 3" angle bracing. You will not find it on mine but it should extend down to the bottom of the solbars (shhhh . . .).
30. At this stage you could now add the 9" wide strip of 0.25" styrene across the bottom of the plain end. It is the full width of the side so overhang the rebated solebar a little each side.
31. Attach four mounting pads to the solebar where the diagonal braces will be mounted. Make them of 0.25mm brass shim, folded up into a shallow channel shape, and attach with superglue.
32. Glue the Northeastern wood bogie mounting bolsters in the marked locations on the bottom of the floor.
33. Trim the Northeastern centre sill material to length and glue that down the centreline of the floor, between the bolsters. I didn't extend it past the bolsters because it would have interfered with the Kadee coupler draft gear boxes.

End Platform

Fig. 3 shows the assembly of the platform. Essentially it comprises a lead sheet which goes back under the car as far as the bolster, a decking of Northeastern scribed sheetwood, two step assemblies hung underneath and a 0.25mm styrene end sill. This also assists in holding the styrene steps in position. Note that the lead is rebated for the steps.

34. Assembly begins by cutting the lead to shape and gluing it to the underside of the floor with contact cement.
35. Cut the scribed decking to the dimensions of the platform and shape it to fit snugly around the battens and door frames on the end wall. Glue it to the top of the lead sheet with epoxy and hold in place with spring hair clips until the glue has set. It overlaps the lead at the end by 0.25mm.
36. Cut and cement the end sill against the edge of the lead sheet and under the protruding lip of the scribed siding.

The platform is completed when we have made and installed the steps.

Steps

37. I made mine from ⅛" angle Plastruct, with sides of 0.5mm styrene. Dimensionally the ⅛" angle is near perfect, producing the required 10½" step height. Gluing Plastruct's ABS styrene however is nearly impossible with any styrene cement but Plastruct's own. I recommend you get some, to use whenever you use Plastruct, even if you use other styrene cement for general styrene work. Superglue will hold it but will give you no time to adjust it. Epoxy will also work but it is slow setting. It will require a complicated assembly jig to hold the three pieces of angle together in the correct position until it has set.
38. When they have been made cement them in place with epoxy to the underside of the platform and styrene cement to the end sill.

Bogies and Equalising

It is now time to trial fit the bogies and adjust for height. Bettendorf appearance sideframes are appropriate with either three foot spoked or disc wheels in place of the original 2'-6" ones. Mine are a pair of old Lindberg ones I have had for years. They have very light coil springs holding the stretcher to the sideframes and consequently are slick riders over track irregularities. They always were the best running bogies I had running on my old layout, and with Mansfield Hobbies' 10.5mm spoked

THE 4400 BRAKEVAN

Prototype Notes by Phil Curnow

The twenty two vans in this class (4400-4421) were the last wooden bodied brakevans built by the South Australian Railways. They were constructed at Islington Workshops in 1954-1956 at a time when steel supplies were scarce. The SAR had already issued the first group of steel bodied 8300 class brakevans in 1947-1948 and the next group were commenced in 1962. The 4400 may have been built as a stopgap and all had been withdrawn by late 1977 after a life of about twenty years.

The general design of the 4400 followed a pattern used by the SAR since the 1910 era. A central guard's compartment with raised cupola was flanked by a goods compartment at one end and a passenger compartment at the other. A small compartment with ventilated exterior door was provided for carrying dogs. This style of van was known as a composite or 'compo brake' with the other two being either 'goods' or 'passenger' thus having two similar compartments.

The differences from previous wooden vans were that the chassis side still had the flat of the channel facing outward, the full length footwalk along each side was omitted, airvents were on both long roof sections and the heater flue was on the cupola roof. The passenger compartment had a seat along each wall with room for ten passengers. A toilet was installed in the guards area and this feature was to add several years to the life of these vans.

wheels their performance hasn't changed.

In addition to the equalising action of the springs I built further equalising into the bogie mountings. See fig. 4 for the arrangement. I do not think it needs further explanation. With one bogie free to rock fore and aft but prevented from rocking sideways, and the other free to rock in any direction, it forms the classical three point suspension.

The aim of all this is to obtain steady running. We have all seen, I am sure, one or two vehicles in a train wobbling like an inebriated jelly whenever the train makes its circuit of the layout. They are a particularly virulent species at exhibitions. The cause is a (often too light) coach body resting on bogies with too small a boss. If the coach body is firmly supported on one broad based bogie the three point suspension thus obtained will provide steady running yet allow the coach to accommodate twisting track and changes of grade.

The lugs which provided lateral support for Bogie A on my model were part of the detail cast onto the Lindberg bogies. Presumably they represented the bearing lugs which did exactly the same function on the prototype. The lugs are shown on Bogie B too in fig. 4, but they cleared the bolster by a considerable distance so I did not bother grinding them off. The dished washers which provide a reasonably small point on which Bogie B pivots I found in my scrapbox. No doubt they could be easily made. I would suggest supporting a suitable washer on the rim of a hole and hitting it with a broad pointed centre punch.

39. Fit the bogies now with the arrangement you wish, and adjust for height. Additional washers can be added to Bogie B. For Bogie A carefully bend the legs of the bearer plate so that the body sits at the right height. Some lowering can be done by gently squashing the legs out a bit. Remove the bogies after the coupler mounts have been made.

Couplers

40. Before the cupola makes the roof uneven the amount of packing required for the couplers could be measured and fitted now. Various thicknesses of styrene cemented together will give a level base. It will provide a little key for the Kadee mounting screws too. Drill and tap the hole now if you wish to screw them in.

Since discovering Kadee's nylon screws in their No. 8 couplers I now use them for No. 5's as well. They are available separately and are the greatest idea since Frank Hornby's Simplex couplers replaced wire hooks in loops. For situations like flat wagons and the open platform deck of our 4400 simply drill and tap right through the deck. When the coupler has been screwed in place slice off the part of the nylon screw protruding out the top with a chisel blade X-Acto knife. A coat of paint renders the screw end near invisible.

Interior Detail

41. This is where we separate the men from the boys . . . I'll side with the boys. Carve up simplistic seats from balsa wood and glue in place along the passenger compartment walls. That is about all that can be seen through the windows in the completed model so paint the interior now and rest satisfied that what nobody can see cannot be picked on. Interior colour was a guess on my part. One thousand kilometres from anything wearing a Piping Shrike logo renders ducking over for a bit of a look difficult, so I used some Humbrol Chestnut Brown I had on hand.

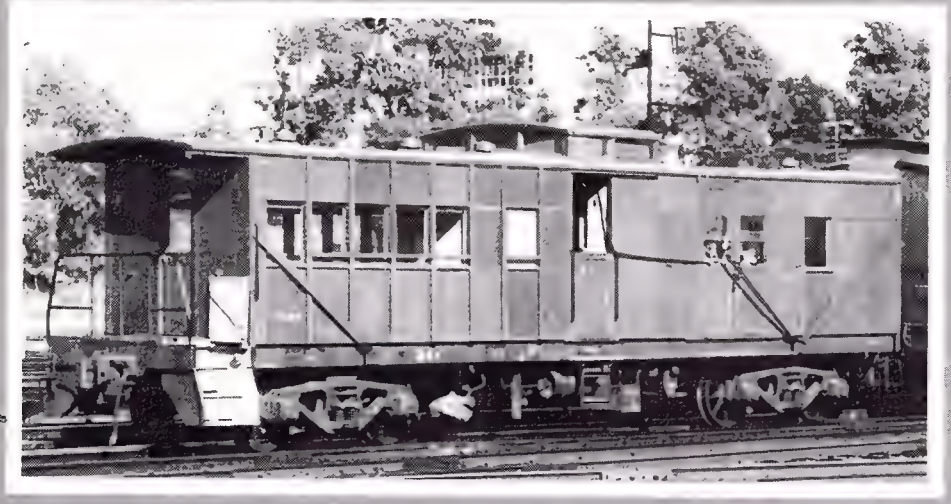
Cupola — 1

A typical SAR cupola is a spidery affair; not at all like the substantial constructions one sees on models of U.S.-of-What'sname prototypes. The corner braces are no more than 3" × 3" and the intermediate window frames even less. So, building up in the normal manner a frame of whose dimensions and glazing it would have been impractical. Little red engines can be made to climb mountains but a scale frame of those dimensions wouldn't be strong enough to stand the short breath of your first examining nitpicker. I did a De Bono and made the glass support the frame. I made up a glass box and the scale framing then became just a decorative addition.

42. Make up a glass box with clear styrene. I struggled with the acetate Slaters call Clear Plastikard and ended up having to epoxy it together. It was later when I found out that Walthers styrene sheet can be assembled quickly with ordinary styrene cement.

Fig. 5 shows the assembly. I rebated the right hand half window behind the left hand half to represent the sliding windows on the prototype. That could be considered an optional job as it did make the assembly take a mite longer.

43. Note that the sliding windows (only) have painted label material applied to their face before assembly. When the box has been assembled place it over a square wooden man-



4420 on the 'Hunt' special tour trails the horsebox out of Adelaide. Note the position of the nearest end brace. Phil Curnow photo.

Alco 953 shunts brake 4420 and its foxhound 'passengers' at Nairne. This is the opposite side to that shown by other photos of 4420. Phil Curnow photo.

As with two previous vans (3540, 3545) a platform and steps was provided at the passenger compartment end of the van. A cover plate across the step area could be folded back against the van body. This class was the only group of brakevans to be fitted with goods style bogies and they were a Bettendorf shape. The van body sides and ends were of wood panels with battens over the joints. The roof was a painted tar/cloth surface.

The only visible change I know of on these vans was the addition of end braces a few years after they were constructed. At the baggage end the brace attaches to the corner pillar level with the top of the windows. At the passenger compartment end there are several variations. For example on 4403 the brace is at the level of the bottom of the window yet on 4404 it is midway up the window.

The colour scheme has remained fairly constant as a red/brown body on a black chassis with black bogies. The end platform is also black except the stair well and under the cover plate which is all silver. Numbers and lettering on the body is silver but on the chassis is white. The roof was probably painted black when built but was wagon red by the mid 1960s.

Due to their rough ride at higher speeds these vans usually trailed only mixed or goods trains. Even with this restriction they still earnt a placid nickname of 'Dolly Varden' after a singer of some repute. The F class 4-6-2 suburban tanks were already known as 'dollies'. The vans spent much of their careers in the Murray Mallee and South East areas where their large passenger compartment could be of use and on these trains the platform would usually trail. 4401 and 4411 were the last to be rostered in the South East being replaced in 1967.

Occasionally they did work passenger trains and Kim Bird remembers them trailing three or four centenaries to Victor Harbor with the platform against the coaches. At Victor both the engine and the brake were turned on the table

drel held in a vice. Score the label as for the earlier windows and peel away to reveal the glass.

The framing is added after the glass box has been attached to the model.

Roof

44. From the Northeastern curved roof stock cut the two roof pieces to size. There is a 0.25mm overhang at the plain end of the vehicle, and of course an overhang the length of the platform at the passenger end.
45. Glue one roof piece in position.
46. Glue the cupola glass box in place, up against the first roof piece.
47. Glue the other roof piece on. Rubber bands around the model with hold all in place until the glue sets. Fig. 6 shows it at this stage.

Cupola — 2

48. Cut the cupola roof from the Northeastern stock again and glue over the glass box.
49. Add the framing to the cupola. Attach them in the order below. The numbers key the items to the materials list in Fig. 5.

(3) Pieces of 0.25mm × 0.25mm styrene over the main roof at the junction of glass box and roof.
(3) Similar pieces on the underside of the cupola roof.
(3) 0.25mm × 0.25mm again along the sides at the top and bottom.
(4) Styrene filler piece in front of the sliding windows.
(6) Scale 2" × 1" and 3" × 1" styrene on the corners as shown in the drawing.
(5) Scale 2" × 1" intermediate frames.

That completes it. Now stand back and feel proud.

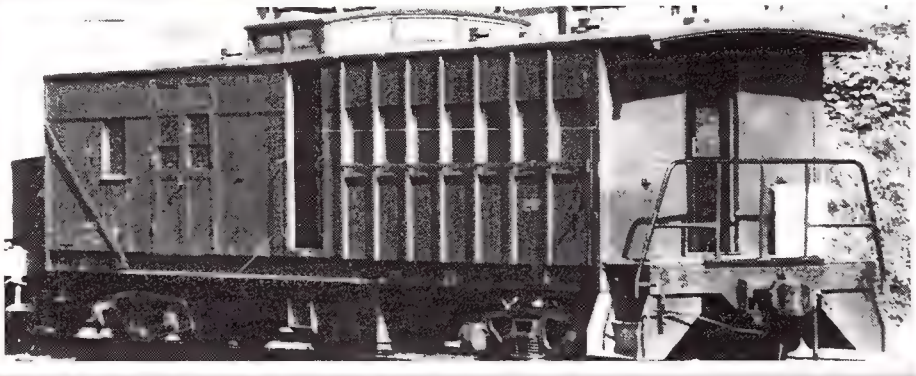
50. Sand all the roof pieces of the model smooth. Steel wool is particularly effective for this, producing a silky smooth finish on the wood.

That completes the whole basic assembly. The little bits only remain.

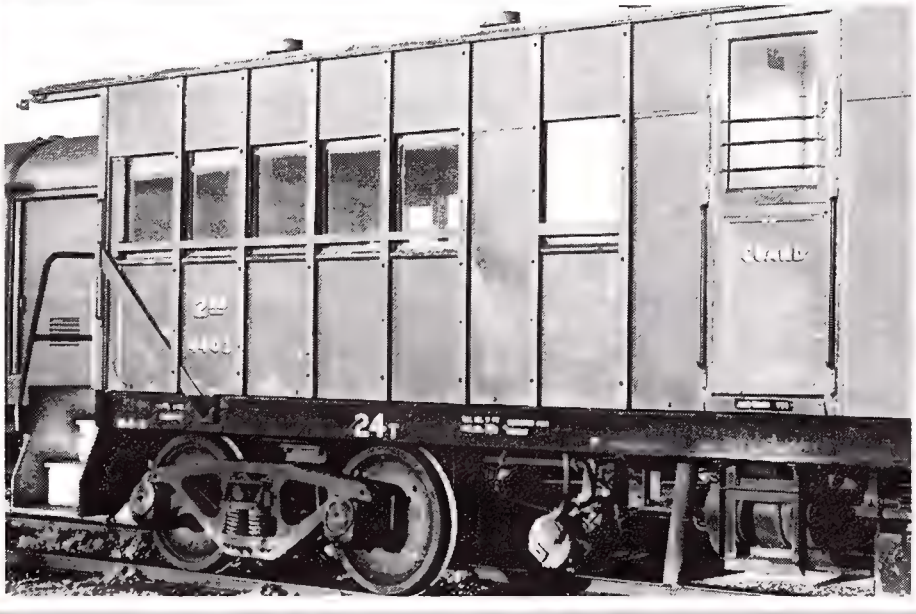
Details — 1

51. Rain strips on the roof are strips of 0.25mm × 0.25mm styrene. Cement them on with styrene cement.
52. The roof vents can be made from domed-headed escutcheon pins filed back to the correct shape while being turned in a drill chuck. Mine were castings from a mould I made for a previous project. Leave the smoke stack in the cupola roof off for now so that the model can be sat on its roof to do the underframe detail.
53. The hinges on the doors are Slaters 0.25mm rodding, cut into scale 4" lengths and cemented on.
54. The long footboards along the underside of the solebar between the guard's door and the double freight doors were made from Plastruct angle. I was sure a flat strip of styrene butt jointed to the solebar would not be very strong so the angle of Plastruct was slipped up behind the solebar to provide better support. This is shown in Fig. 7, along with a few other details.
55. I bent up my handrails from 0.25mm brass wire. Superglue them into holes drilled in the appropriate places as measured from the drawings. Three-eighth inch staples would also serve but their cross-section is rectangular rather than round as on the prototype. Another advantage of brass wire is that, if polished before installation, they can be painted with clear gloss in the painting stage to represent the real brass handrails.
56. Note on the plain end the two small lugs bridging the body and end beam joint. Some styrene formed into a tee section represents these.
57. Over the guard's door and adjacent panel is a rain deflector strip. There is one on each side. Make these of 0.25mm brass shim and superglue them in place, at a slight angle to the sides.
58. The platform end rail could conveniently be added now as the roof is on to protect it from handling damage. Solder it up from 0.25mm wire. Hold all the pieces over a drawing with masking tape and tweezers, and go very lightly with the solder. Superglue it to the end sill.
59. The windows in the guard's doors have exterior bars of quite small diameter. I used short pieces of 0.008" guitar string wire and superglued them on. Guitar wire is readily available in music shops in small packets and in sizes from 0.007" upwards. Do not try to cut it with wire cutters; it is much too hard. File a groove and snap off with pliers.
60. The stirrup steps on the plain end can be a fiddly job but they are a common feature on SAR bogie rolling stock so it is worth the effort to develop a standard technique of making them. This is mine:

(1) Cut out rectangles of 0.13mm (0.005") brass shim of the right size and bend the back lip in a good sharp cornered modeller's vice.



4403. Note the lack of end brace. Phil Curnow photo.



Close view of the passenger compartment of 4420 in June 1973. Note that end brace commences at the level of the window sill. Phil Curnow photo.

as this allowed the guard and ticket collector to walk through the train as required.

The construction of more steel 8300s caused the steady withdrawal of older vans. In the early 1970s the Union lodged objections on behalf of the guards to working in vans which lacked basic toilet facilities. By this stage the 4400s were used on suburban goods working and ballast trips. Boasting a toilet the 4400 lingered on however only 4403, 4413, 4417, 4420 and 4421 remained in 1973 then in December 1977 4420 was the last to be withdrawn. Most were converted to various workers vans although 4417 was retained by the ARHS Steamranger as a stores van.

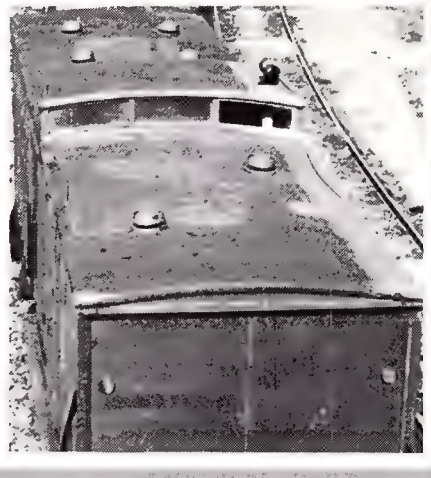
References:

AMRM Sept/Oct 1968; 4400 class outline plan but lacking panelling detail

AMRM Mar/Apr 1980; old style brakevan 4074

AMRM May/Jun 1980; 8300 class steel vans

Various issues of ARHS Recorder and personal notes



Roof view of 4420. Phil Curnow photo.

(2) Cut staples to an L shape with the short leg matching the width of the shim step.
(3) Assemble two staples and the shim step in the vice as shown in fig. 7 and clamp up. Because we are going to solder the assembly together it is advisable to put some masking tape on the jaws to prevent heat from being drawn away.
(4) Apply flux and lightly solder up.

Soldering Delicate Joints

There are a number of occasions when we need to solder small joints with as little solder as possible. It is difficult melting a small amount of solder on the tip of the iron before applying it to the job, and the usual result is a large unsightly blob. Instead, wipe the tip of the iron of all surplus solder with a wet rag. Slice very thin pieces of solder off your stick of resin core or whatever. Flux the work and place one piece of solder in the flux with tweezers. Apply the iron to the metal of the joint. With no surplus solder on the iron only the small piece will be melted into the job resulting in a clean looking joint.

Another variation of this technique can be used in different situations — track construction comes to mind. Start with a clean iron as before but touch the iron onto one of the thin slices. Then apply the iron to the fluxed job. As the iron has only a very small amount of solder on the tip only a small amount will transfer to the job.

Sealing the Card

61. Paint the card and wood with two or three coats of thin shellac, allowing a day to dry between coats. Sand the wood parts with steel wool after each coat. Painting card with the final paint finish without sealing it in some way makes the fibres stick up, producing a rough looking finish. The shellac should be thin however to avoid filling details.

Underframe Detail

This is where 'enuf is enuf' in regard to blow by blow descriptions I think. An attempt should be made to model some underframe detail but the form and amount is very much a personal choice. It can range from odd shapes stuck to the underside to a faithful reproduction of all the brake, power and lighting systems mounted there-under. Odd shapes, however, can look very effective, and the detail on my model is actually closer to the former method than the latter.

62. My attempt at underframe detail consisted basically of attaching various objects roughly in the same positions similarly shaped objects were seen in photos of the prototype. I used battery box and dynamo castings, some tubular material for cylinders, and odd shaped wooden blocks. Once installed I added more 'effect' by attaching some bent and twisted wire between and around the detail. Viewed from a low angle it presents a busy appearance which is very pleasing. Fig. 8 shows it for what it really is in stark reality.

Details — 2

63. The smokestack can go on the cupola roof now the underframe has been worked on. Mine was a brass casting found in the scrapbox.

64. Make the diagonal bracing now, if you wish to have them, from 0.25mm brass. They were fitted later in the vehicles' lives. Tin the outside surface with a smooth coat of solder. As those parts protrude from the sides considerably they are likely to be handled frequently with the risk of the paint being rubbed off. Floquil is very hard to rub off a soldered surface, hence the need for tinning it now.

65. You can choose whether to fit the marker lights now or after the model has been painted. I prepared mine at this stage, including the method of attaching them to the model, but

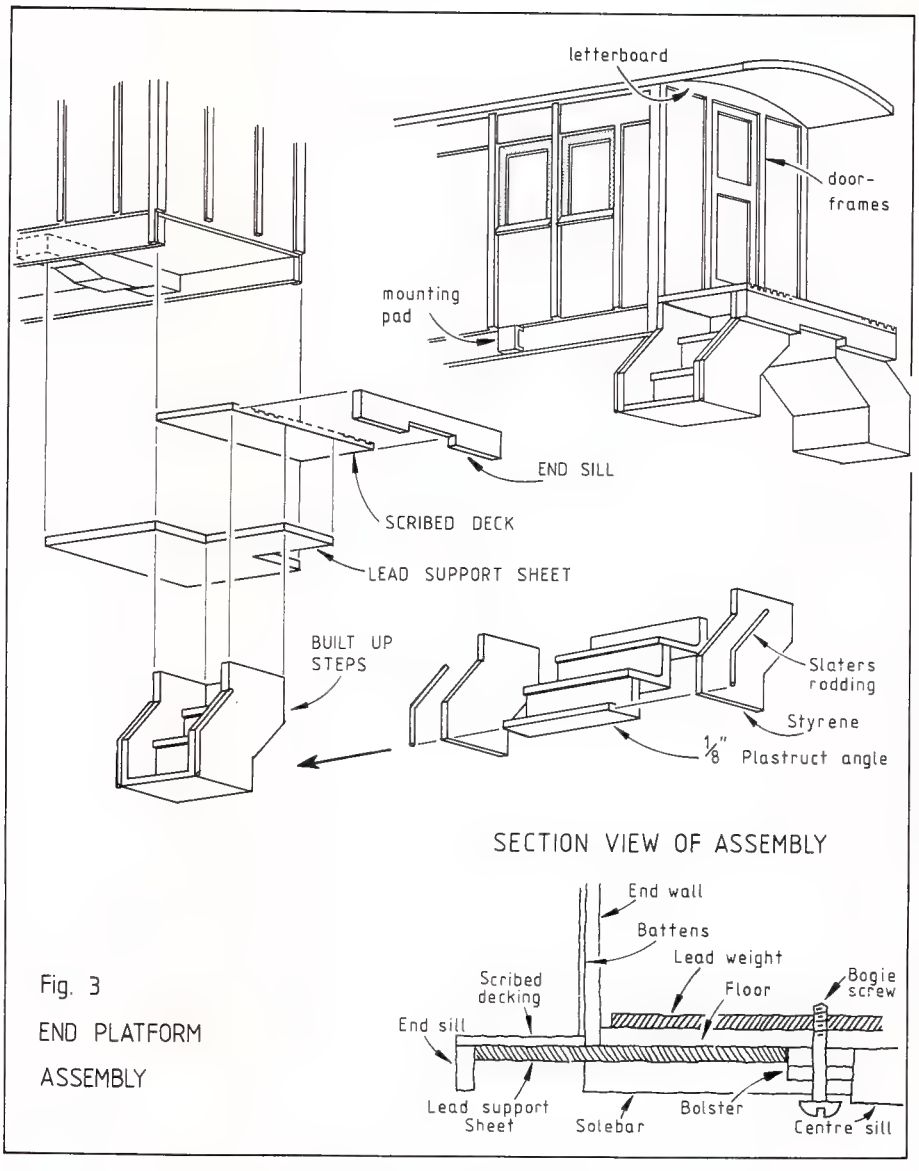


Fig. 3 END PLATFORM ASSEMBLY

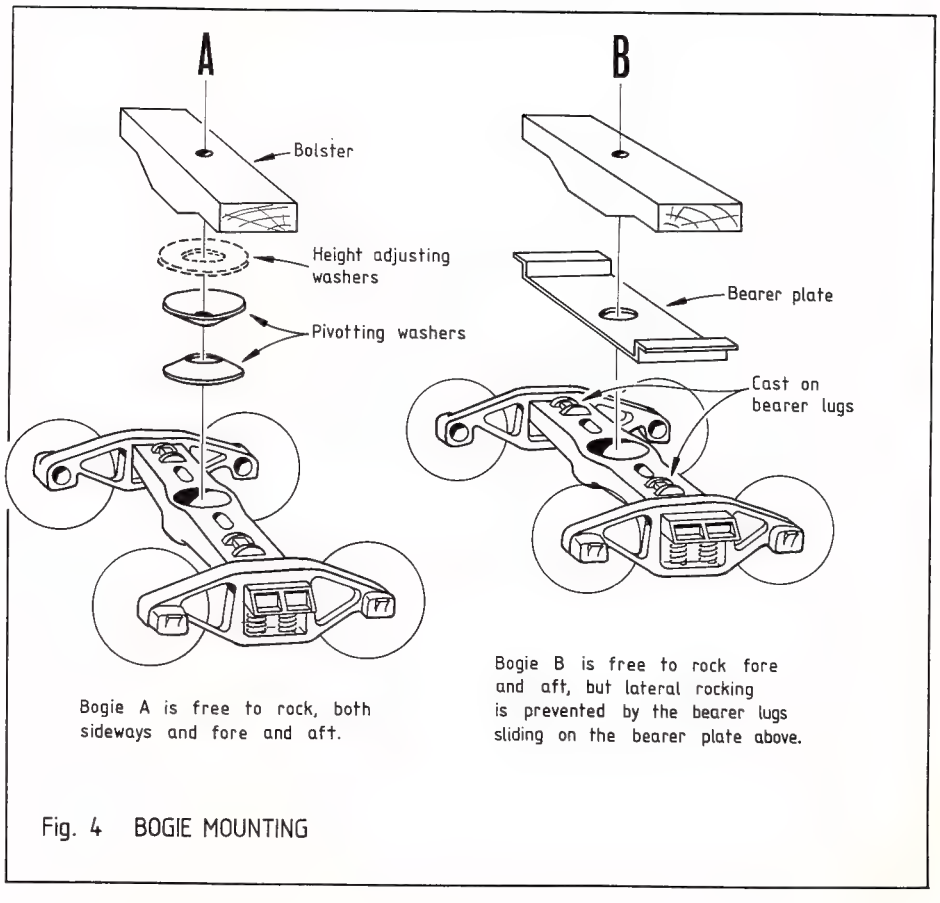
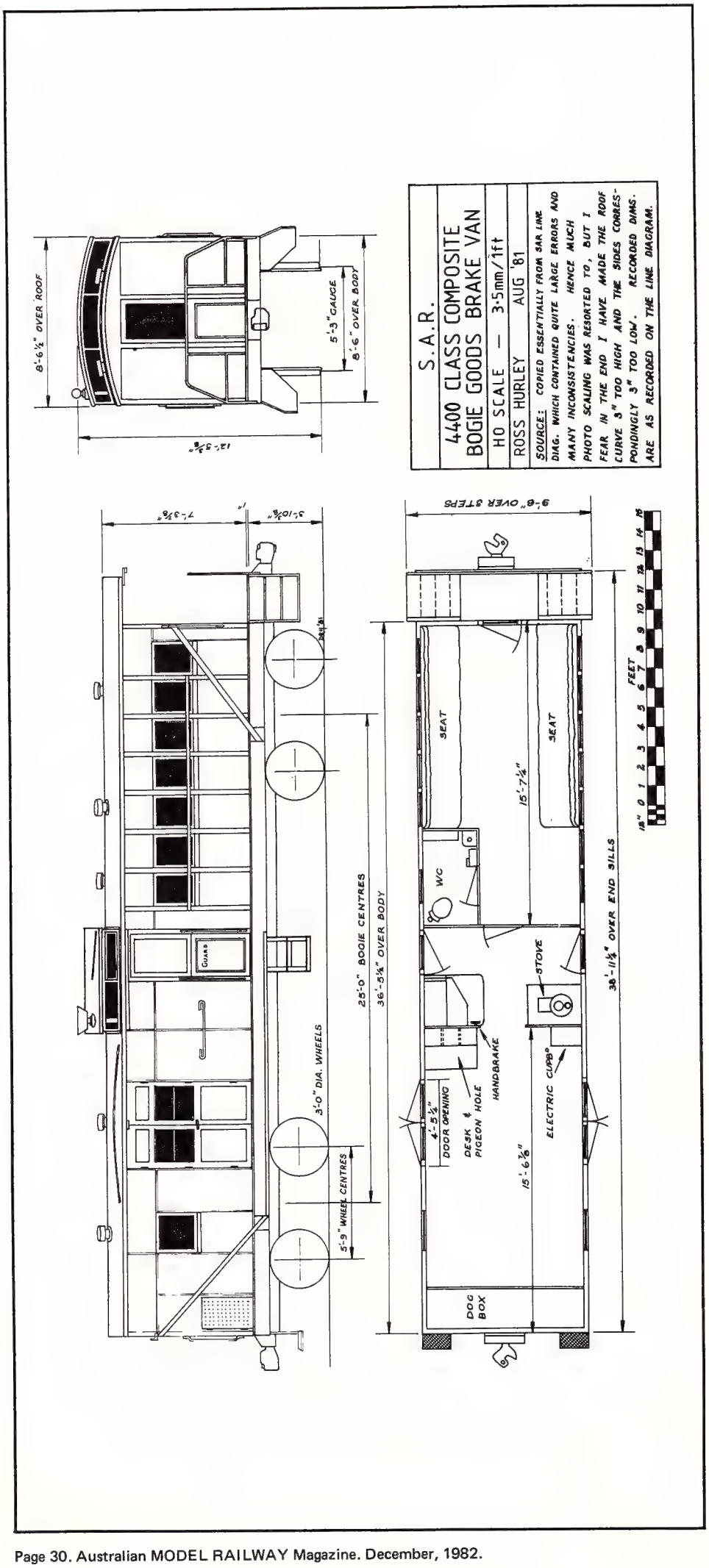

A
B
Bolster
Height adjusting washers
Pivotting washers
Bearer plate
Cast on bearer lugs
Bogie A is free to rock, both sideways and fore and aft.
Bogie B is free to rock fore and aft, but lateral rocking is prevented by the bearer lugs sliding on the bearer plate above.

Fig. 4 BOGIE MOUNTING


S.A.R.
4400 CLASS COMPOSITE
BOGIE GOODS BRAKE VAN
HO SCALE — 3·5mm/1ft
ROSS HURLEY AUG '81
SOURCE: COPIED ESSENTIALLY FROM SAR LINE DIAG. WHICH CONTAINED QUITE LARGE ERRORS AND MANY INCONSISTENCIES. HENCE MUCH PHOTO SCALING WAS RESORTED TO, BUT I FEAR IN THE END I HAVE MADE THE ROOF CURVE 3" TOO HIGH AND THE SIDES CORRESPONDINGLY 3" TOO LOW. RECORDED DIMS. ARE AS RECORDED ON THE LINE DIAGRAM.
8'-6½" OVER ROOF
5'-3" GAUGE
8'-6" OVER BODY
13'-5⅜"
7'-3⅜"
3'-10⅜"
9'-8" OVER STEPS
SEAT
SEAT
15'-7½"
W/C
STOVE
ELECTRIC CUPB°
HANDBRAKE
DESK & PIGEON HOLE
4'-5½" DOOR OPENING
15'-6⅜"
DOG BOX
36'-11½" OVER END SILLS
25'-0" BOGIE CENTRES
36'-5¾" OVER BODY
3'-0" DIA. WHEELS
5'-9" WHEEL CENTRES
GUARD
FEET
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
15" 0

painted them with the model separately before installing them. Fig. 7 again shows all.

The white metal marker lights I used had large mounting spigots cast on one side. I cut these off, drilled a small hole and superglued in a short length of fine wire instead. When mounted the wire runs back under the platform roof where it is nearly invisible. After painting the lamps black, but before fitting them, I inserted the coloured jewels. What colours to use set me a problem though. In the end I used guesswork and chose a red jewel facing the rear and amber ones facing side and front. PVA adhesive was used to enable an easy change should anybody show me that I was wrong. In its near complete state I showed the model to Phil Curnow when he was over on one of his travels East and he confirmed my guess as correct SAR practice.

Painting

It is this stage that sorts models into one of three categories. The first type is the exquisitely crafted model with the rough paint job that makes a rough model. The second is the not-so-good model with a very good paint finish that makes a very good looking model. The third category is the model which has been built with some care and has had a paint finish also applied with care that produces a competition winner.

The moral of course is that whilst a good paint job can usually make a below average model look quite good, a well crafted model will look like a sloppy attempt if it is painted with a sloppy paint job. Take a bit of care, think ahead as to the best order in which to apply the various colours, consult the manufacturer's literature or hobby magazines on how to use certain brands of paint, and be prepared to practise on scrap first.

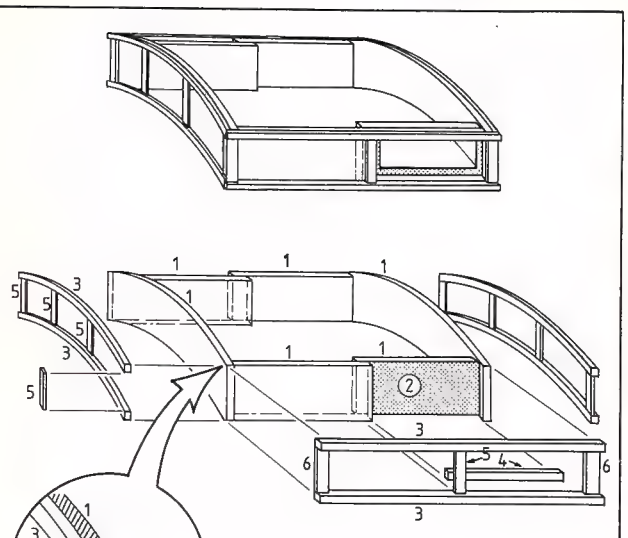
66. Lacking an airbrush I painted my model with Floquil and Humbrol paints using fine tipped and medium size sable hair brushes. They taper to a fine tip to allow accurate edges to be painted yet have sufficient body to hold a generous amount of paint for large areas. I consider sable brushes essential items rather than luxuries for brush painting models. They need care in handling however. When finished wash first in thinners, then gently wash them in very hot water with washing powder. It is this step that gets out the last of the paint and makes the brushes last longer. Before putting them away carefully shape the tip to a point in the palm of the hand and slip a sleeve of plastic tubing over the bristles so they will not be damaged during storage.

SAR brake vans were painted a brown/red colour that borders on maroon. My mix for SAR Maroon was four parts Humbrol Crimson, two parts Chestnut Brown, about one part White (judge the amount of fading you want by eye), and about half to one part Blue. Mix it up in daylight and add the blue last, a little at a time, until the faintest tinge of maroon starts to appear.

I have probably done most of my paint mixing in daylight before, but I did not quite realise how essential this was until I painted this model. It was mostly an evening project so I mixed up my first coat of maroon under the kitchen lights. I thought that if I got it looking right there it will also look right on the layout which would be under similar lights. The next morning my carefully judged 'red with a hint of maroon' was in reality a bright purple! Two more coats of the correct colour, mixed at the weekend in daylight, produced a model that looks right both in daylight and under the artificial lights of my layout.

Do not paint the brass handrails when you paint the body.

67. We have yet to attach the diagonal braces but we can paint them with the maroon at this stage. They can be held conveniently by sticking them to sticky side up masking tape.



MATERIALS LIST

1 0·4mm clear styrene
2 Painted label material
3 0·25mm x 0·25mm styrene
4 Styrene filler strip
5 Scale 2"x1" styrene
6 Scale 3"x1" styrene (overlaps 2"x1" at corners - see inset)

Fig. 5 CUPOLA

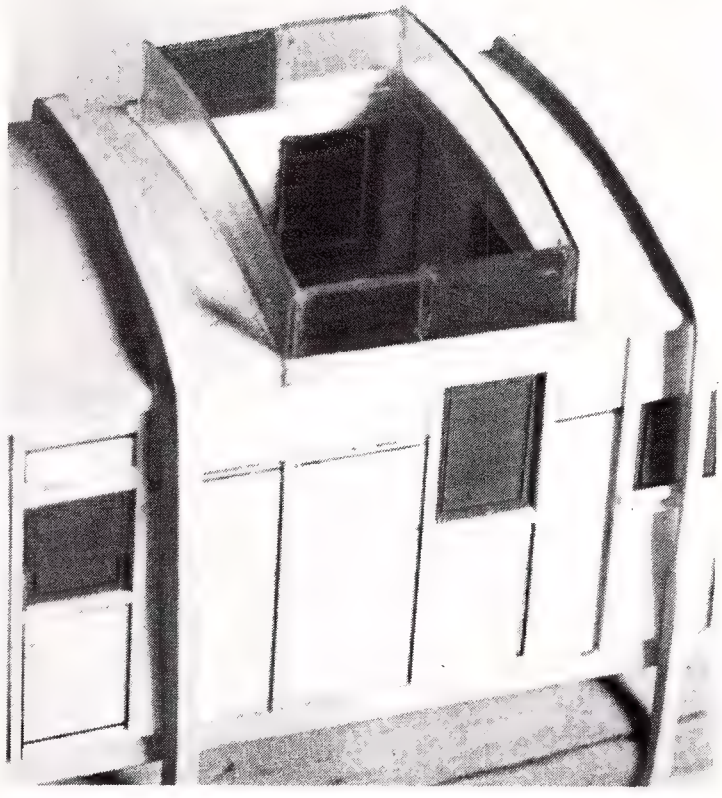


Figure 6

For all the painting steps give the model two or three thin coats rather than one thick one that will obscure detail and look rough. For both Humbrol and Floquil it is essential to allow a week for each coat to fully harden before applying the next. Leaving Floquil until all trace of paint odour has gone is also a good rule of thumb.

68. With the body complete paint the brass handrails now with Floquil Glaze to have them retain their well handled shiny brass look.

Diagonal Bracing

69. With superglue attach the diagonals to the sides. The bottoms go on the mounting pads we fitted in step 31.

Painting the Underframe

70. My mix for a weathered black was four parts Floquil Grimy Black, one part Reefer Gray and two parts Rust. Paint over the entire underframe, including all underbody detail, and bogie sideframes. Note that the part of each diagonal brace that extends over the underframe is also painted black.

71. Paint also the entire end platform, including handrail, but not the inside of the steps.

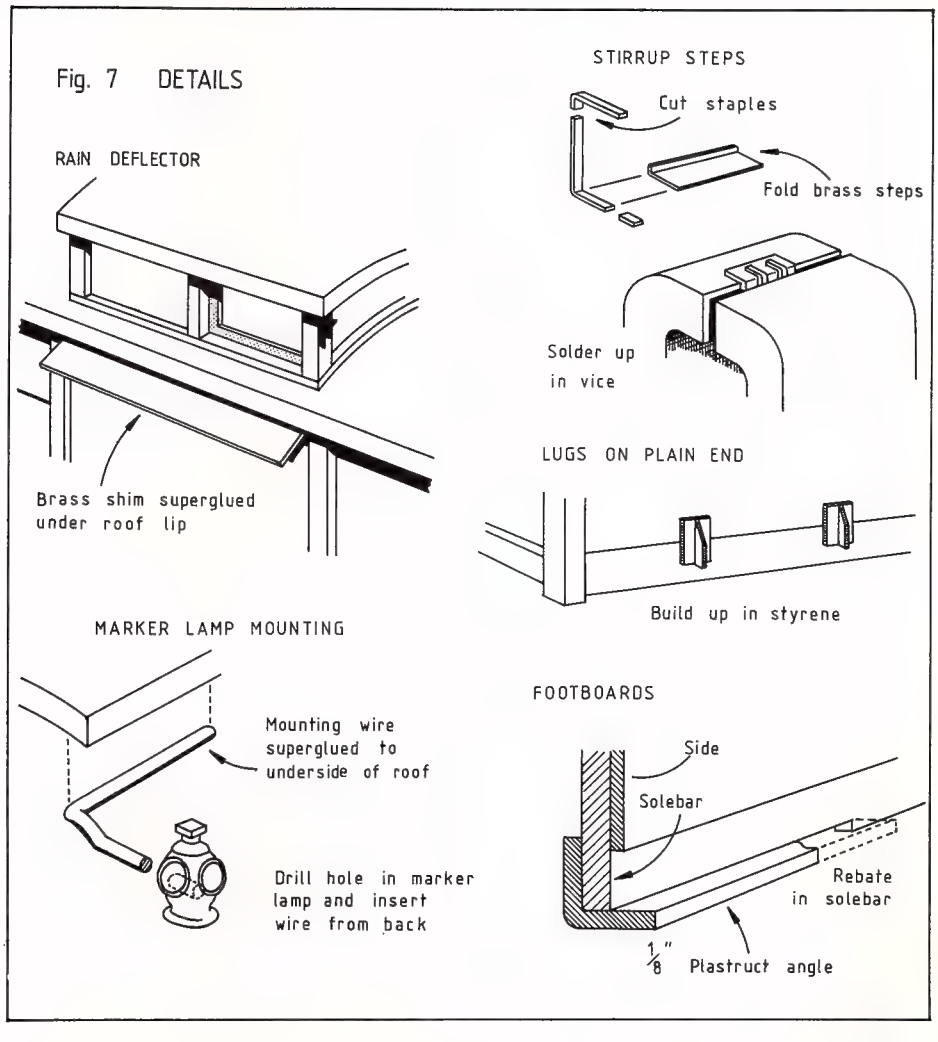
72. When the underframe black has dried paint the inside of the platform steps silver.

Decals

73. When I was sure all the paint had fully cured I applied the lettering to my model with decals. I used M&J gold lettering sheets for the lettering on the body, and some white decals that came in a Ratio wagon kit for the white '24T'. The M&J decal sets I used were: N scale set No. 093 for the words 'GUARD', Ho set No. 2202 for the '2nd' class identification, and HO set no 9003 for the car numbers. These last had to be applied as individual numerals, coaxing them into position carefully with tweezers and the tip of a wet sable hair brush. I was left with not a great deal of lettering but an abundance of yellow lining in each sheet. I guess NSW modellers find it useful for something.

Follow the application instructions on the sheets, but note a couple of points. The background film should be trimmed off the decals as close to the lettering as you can get, and they adhere best to a gloss finish. Once in position a small drop of Walthers Solvaset will make them snuggle down onto the surface. The clear flat finish that is applied to the model as a last painting step will hide the remaining decal film surrounding the letters.

74. The other small white lettering around the model; underframe, guard's doors, etc., is only scratches of white ink applied with the back of a mapping pen. Only at distances greater than a few centimetres does it look anything other



than authentic lettering.

As a postscript on the subject of M&J decals, it was during the aforementioned visit of Phil Curnow that he told me that the body lettering on 4400's is silver! Oh well, it has all been done now, and it does look exceedingly good even if it is the wrong colour, so I will live with it. At least it matches Lima's equally incorrect 8300 brake vans. If the colour concerns you you will have to search for any silver or white lettering in decals, or hand letter your model. Some people can do very good lettering with tempered lettering nibs of the mapping pen style.

That completed my model apart from a coat of Floquil Dust. This was applied with an airbrush acquired about this time. Dust cannot be brush painted on — it goes streaky and builds up in corners as a white deposit. Applied with an airbrush it gives a sur prisingly good effect particularly when the light strikes the model obliquely. I plan to run 4403 in a fairly new condition to fit in with the era of my layout so do not plan to weather it much more.

There we have it. I was pleased with how she turned out, and found no difficulties mixing wood, card and styrene in the manner used on this model. Overall it took me about a month of casual evenings to make. A most distinctive SAR model it is. Whether or not you decide to build a 4400 Composite Brake Van it is my hope that I have at least whetted your appetite for building some distinctive vehicles of your own.

MATERIALS LIST

Illustration card
0.4mm clear styrene sheet
0.25mm styrene sheet
0.5mm styrene sheet
Evergreen styrene strips:
- HO scale 3" × 1"
- HO scale 2" × 1"

⅛" Plastruct angle × 20cm
Slaters 0.25mm styrene rodding (available in Slaters' assorted rodding pack)
Adhesive labels
Northeastern wood products:
- 0.8mm sheetwood
- Milled floor stock × 15cm
- 1.6mm sheetwood
- Bogie bolsters × 2
- HO scale 3" scribed sheetwood
- Caboose roof stock × 15cm

2-3mm thick balsa wood sheet
Sheet lead, 110mm × 25mm (from plumbers suppliers)
Brass shim: 0.25mm, 0.12mm
0.25mm brass wire
0.008" guitar string wire
Staples × 4
Draughtsman's tracing paper
Escutcheon pins × 7
Cast smoke stack
Cast battery box (e.g. Protype)
Cast dynamo
Marker lights × 2, with red and yellow jewels
M&J decal sets:
- No. 093
- No. 2202
- No. 9003

Bettendorf bogies and 10.5mm wheels
Kadee No. 5 couplers and Kadee nylon screws

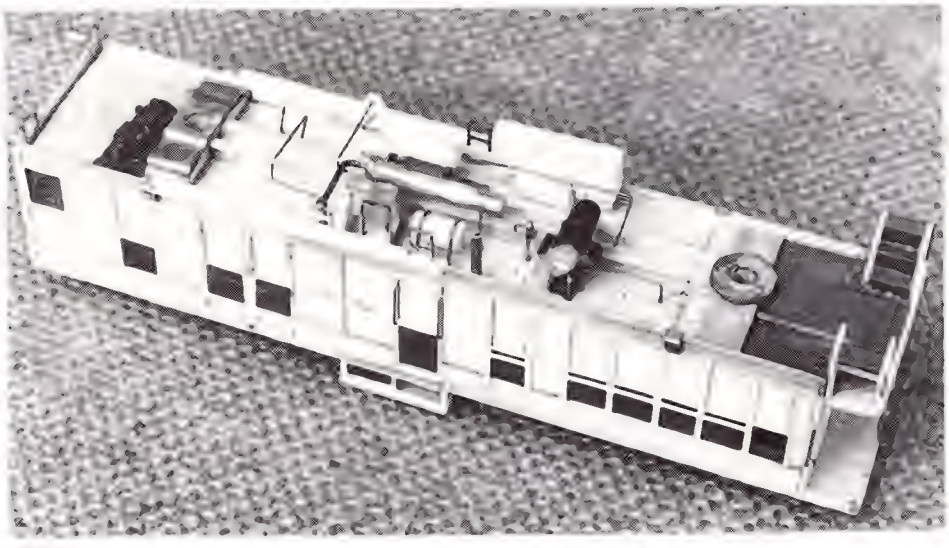
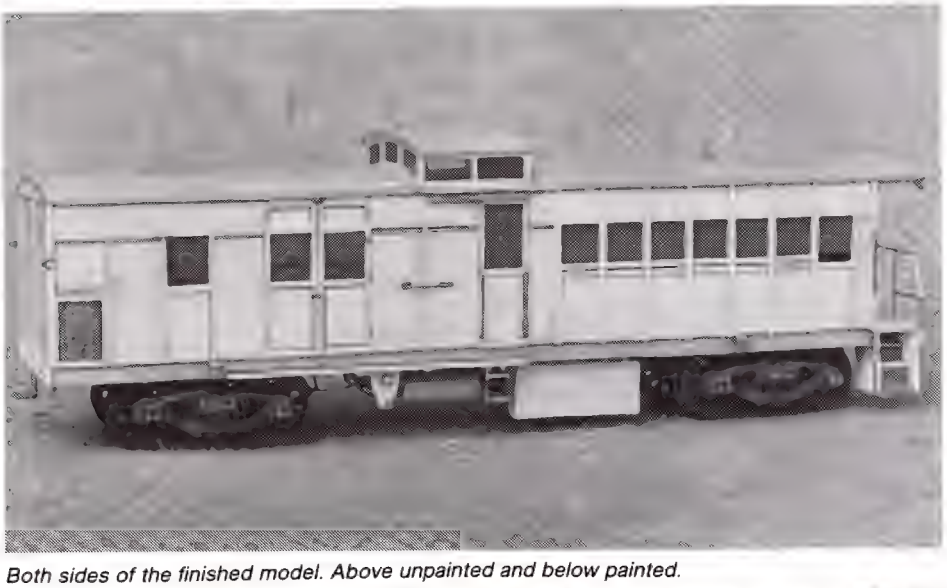
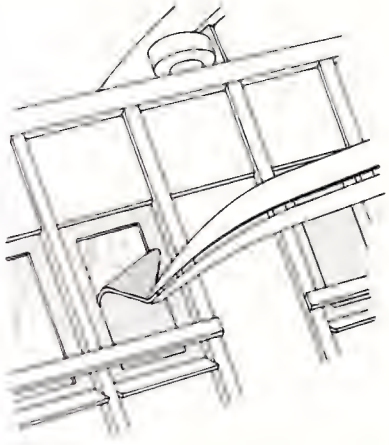


Figure 8



Both sides of the finished model. Above unpainted and below painted.

Fig. 9 PEELING OFF WINDOWS



WESTRAIL WAGON RECODING

Several of the Australian mainland rail systems are now using the Railways of Australia system of bogie vehicle classification. The July/August 1979 issue of A.M.R.M. brought to readers' attention the Victorian Railways' situation, while the March/April 1980 edition covered Australian National activities in this field. This segment looks at Westrail wagon recoding.

by Paul Rogers

The construction of the 1435mm gauge Trans-Australian Railway during World War I provided much rhetoric on the linking of the continent by rail from east to west. Such oratory overlooked the fact that through-working between Federal and State systems was not possible owning to several break-of-gauge points, no less than three obstacles of this nature being present between Perth and Adelaide alone. The Western Australian rail system, which had developed as a 1067mm gauge network from the 1870s onwards, thus remained effectively isolated until the gauge standardisation works of the 1960s.

As a consequence, the Western Australian Government Railways Commission (which now trades as Westrail) was in a position to design an intersystem freight vehicle fleet on the basis of relatively few wagon types meeting a large number of operating requirements economically and with a high level of reliability. Not all standard gauge vehicles belonging to this organisation are affected by the R.O.A. coding system, just those items of rolling stock likely to see service on intersystem assignments over 1435mm and/or 1600mm gauge tracks. Excluded from the reclassification are private owner wagons operating on Westrail standard gauge routes, Westrail service vehicles, bulk grain hoppers whose duties restrict them to "internal" operations and ore carriers working in a similar environment. In addition, certain sub-classes of "intersystem" type vehicles are held captive to the Western Australian system by virtue of traffic requirements or stock characteristics.

An analysis of the Westrail intersystem codes will reveal that the first two letters conform to R.O.A. guidelines, while the final letter denotes whether the vehicle is available for bogie exchange or not. The third letter is a differential to indicate vehicle designs within a particular group. In certain classes, there is a continuing process of transferring "intersystem" type wagons to and from parochial duties; details appear in the relevant sections of these notes. Since adoption of the R.O.A. codes in 1979, Westrail has introduced new three-letter codes to identify some of these occurrences.

I intend to give brief details of each wagon group, noting variations within that group as we come to them. All vehicle codes commence with "W" — denoting Westrail ownership. Those codes ending in "X" indicate vehicles having bogie exchange capability; those ending in "Y" denote wagons restricted to full or limited standard gauge use. The special significance of the "S" suffix is explained herein also.

WVX Box Cars — recoded to WBAX

These vans were built to accommodate general freight requiring covered transit. The class-leader, coded WV and easily recognised by its off-centre side doors, is now in departmental service. Sixteen cars were fitted with dividing bars and recoded WVL, and 2 units were fitted out as insulated vans for perishables traffic and recoded WVP; these 18 vehicles are usually captive to the Westrail system — and consequently remain unaffected by the reclassification — but provision exists for their use over Australian National tracks as far east as Port Pirie to be authorised if required.

One WVX remains to be reclassified as at 30 April 1982, and one has been withdrawn under the old code. All of the other 265 vans became WBAX type between October 1979 and March 1982.

WF and WFW Flat Cars — recoded to WFDY

Like many modern Australian flat cars, the WF class wagons were intended as multi-purpose vehicles, although the use of "F" as the secondary letter in the new code of WFDY does not immediately point out any container carrying ability. Early examples of the WF class were used for construction purposes on Western Australian gauge standardisation works; in revenue service, they are equipped for a variety of tasks — containers, semi-trailers, timber, steel products, to name just a few — and they can accept stanchions and bolsters if needed. The WFW class was a derivative code fitted out for the carriage of iron ore containers; other modified wagons coded WFM and WFP once existed for the conveyance of nickel matte.

The 19 WFW wagons received the WFDY coding between February 1981 and September of that year. With the exception of one vehicle, all 99 WF cars have been treated in the same manner since October 1979. WFDY cars are not meant to be bogie exchanged and are normally allocated to services west of Port Pirie.

WFCX Flat Cars — recoded to WQBX

The 6 vehicles of the WFCX class were altered to WQBX status between October 1979 and October of the following year. As these were primarily container wagons, they received the secondary coding "Q", in lieu of "F" which is used to designate more orthodox flat wagons. The cars are available for universal 1435mm/1600mm gauge working.

WFX and WQC Flat Cars — recoded to WQCX

All 206 WFX container/general purpose flat wagons received the WQCX coding during the period October 1979-March 1982. The WQCX coding denotes that the vehicle is suitable for widespread 1435mm/1600mm gauge operations.

In 1981 a total of 18 WQCX vehicles were temporarily assigned to Teutonic Bore traffic prior to delivery finalisation of the WFA class container carriers; those so allocated received the WQC classification, one of the new three-letter codes instituted by Westrail to which earlier reference was made. All 18 WQC units reverted to WQCX status during 1981/82.

WGS and WGX Open Wagons — recoded to WOAS/WOAX

"Conversions" from the base code of WGX to WGS for specific mineral traffic and vice versa are more in the line of recodings for traffic purposes. They frequently took place in the past and have continued to the present time. So there was a need under the new coding system to sustain separate identity for wagons reserved at any given time for the transportation of gypsum. A new code of WGG thus appeared. When regular consignments of bulk soda ash came into being from Osborne, S.A., to Kewdale, W.A., wagons suitably modified with crossbars and tarpaulins became WOAS sub-class, a rare example of bogie-exchangeable cars possessing a code not ending in "X".

The replacement code for WGX is WOAX, signifying generally unrestricted use over 1435mm and 1600mm gauge networks. The complex recoding of WGS/WGX cars up to April 1982 can be summarised as follows:

72 WGS to WOAX
4 WGS to WOAX to WGG
3 WGS to WOAX to WOAS
2 WGS to WGG to WOAX
1 WGS to WGG
131 WGX to WOAX
6 WGX to WOAX to WOAS
5 WGX to WOAX to WGG to WOAX
3 WGX to WOAX to WGG
3 WGX to WGG
1 WGX to WGG to WOAX

This accounts for the 231 members remaining in this class.

WQX Special Flat Wagons — recoded to WFEX

These pyneboard carriers were formed from WGX type vehicles by removal of the open wagon superstructure and fitting of fixed and movable bulkheads. In theory, the pair is available for unrestricted multi-gauge usage but this would be tempered by actual traffic requirements. Both cars received the WFEX

Continued on page 42

AT A GLANCE: WESTRAIL FREIGHT WAGON RECODING

1st letter
W = Westrail ownership

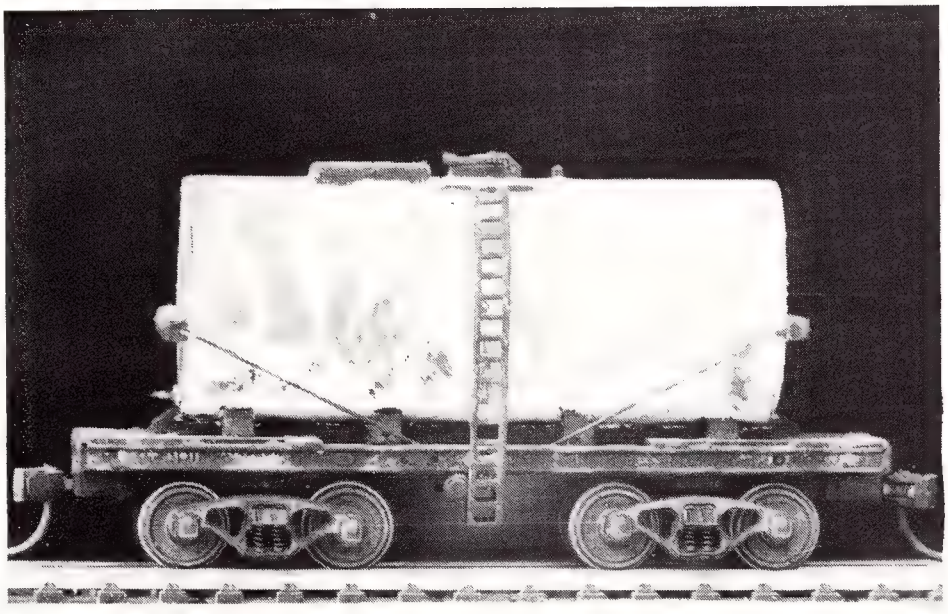
2nd letter
B = Box car
F = Flat car
M = Motor vehicle transporter
O = Open wagon
Q = Container flat car

3rd letter
This cipher is generally used to distinguish between vehicle types in the same group (or in similar groups where the secondary letter differs).

4th letter
Operational characteristics and capability of wagons; viz.
S = Suitable for bogie exchange but vehicle reserved for a specific traffic.
X = Suitable for orthodox bogie exchange.
Y = Restricted to single (1435mm) gauge running at 80 km/h in N.S.W. and 100 km/h elsewhere.

MILK TANKER

Garry Kahler continues his series on kitbashing local outline models from available model kits.

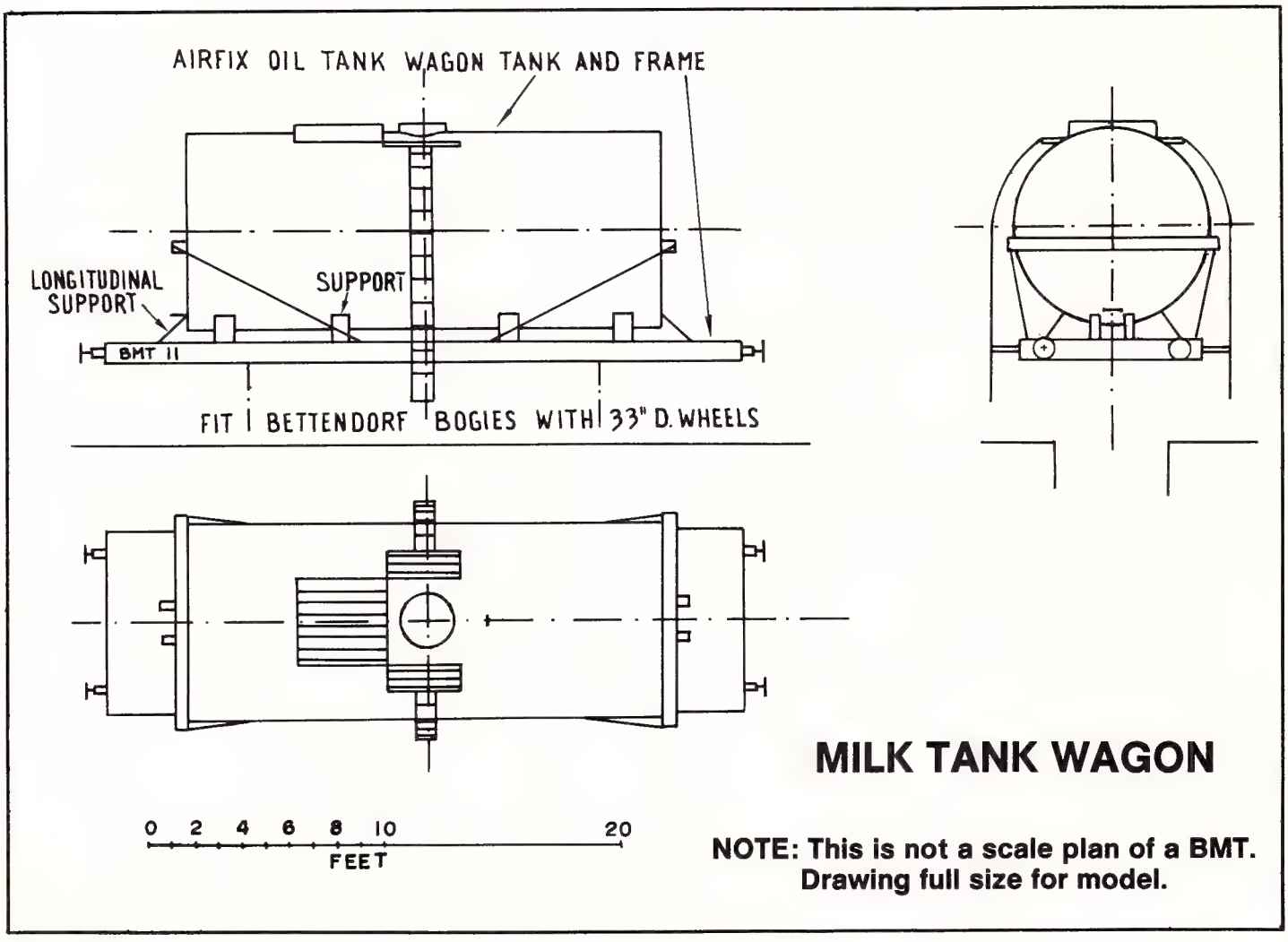


As completed, a BMT.

In this issue we shall continue with another New South Wales goods wagon in HO scale. The Airfix Oil Tank Wagon kit can be converted into a facsimile of a N.S.W. 'BMT' milk tank wagon. I must point out that this is not an exact scale model.

To begin with the oil tank wagon should be disassembled (or if still a kit not assembled. Ed.). The tank is then cut to length of 68mm equally about the centre filling cap. Onto the ends glue a piece of 0.020" plasticard cut roughly round but slightly oversize. When the glue has properly set then very carefully file down the rough edges until you have a smooth chamfered edge the diameter of the tank. Before gluing the second end piece on, place about 1½ oz (42gms) of lead inside the tank.

For more details of N.S.W. milk tankers see A.M.R.M. January/February 1979.


AIRFIX OIL TANK WAGON TANK AND FRAME
LONGITUDINAL SUPPORT
SUPPORT
BMT 11
FIT BETTENDORF BOGIES WITH 33" D. WHEELS
0 2 4 6 8 10 20
FEET
MILK TANK WAGON
NOTE: This is not a scale plan of a BMT.
Drawing full size for model.

Next carefully remove the four axle boxes from the base. Do not throw them away as they will be used on another vehicle later. Turn the base upside down and add two bolsters in position for the bogies. The bolsters can be made up from three pieces of 0.060" plasticard 5mm wide, one piece being 25mm long, while the other two should be 10mm long. Glue the two shorter pieces to the ends of the longer pieces so that you have a space of 5mm between the two shorter pieces.

When the glue has set chamfer each end down, from full thickness at 10mm in from the end to 1mm thick on the end edge, so that you leave 5mm flat in the centre. Mark the centre and drill a 1/16" diameter hole. Take a bogie, that has to be purchased separately, and place an 8 BA bolt through the bogie centre hole, then place an 8 BA washer on the bolt and screw the bolt through the hole in the bolster until the bogie sits firmly on the bolster.

Allow some free movement sideways but not too much free play. Now place a nut on the bolt and turn down into the recess in the bolster. Cut off the excess length of the bolt and file flush with the bolster. Secure the nut in place with a small amount of glue. The bolster, complete with bogie, can then be glued to one end of the base of the underframe. Repeat the process for the opposite end. While on the base fit couplings of your choice.

Now turn the base over to right side up. Make up and position two longitudinal tank supports each 75mm long. Glue into place 5mm apart along the centre of the base, then make up 8 transverse tank supports each 7mm long and glue four on each side of the longitudinal supports and 20mm apart. When these have set mount the tank carefully onto the supports and glue in place, ensuring that the tank sits perfectly upright. The tank filler should be in the upright position and not leaning to either side.

Once the tank has been glued into place add the release cock on the lower part of one end of the tank. For this you can re-use the same part removed from the oil tank wagon. Now cut two pieces of balsa each 2mm square and 32mm long. Cut a groove along one face of each piece and across each end. Mount and glue one piece across each end of the tank so that the groove is external and the balsa horizontal. Allow to dry.

Next take a piece of fishing line or nylon thread and firmly place this into one end bar groove. Allow about 100mm over one end and 200mm over the other. Take the longer piece and pass it under the open frame in the centre side of the base behind the sideframe. Turn the thread up to the grooved bar on the other end and continue across, firming the thread into the groove. Reverse the wagon and pass the two threads under the frame on the opposite side, the same as before, but tie the two ends off in a knot under the frame. Make the knot neat and firm. At all times make sure that no slack appears in the thread.

The next step is to take the walkways from the oil tank wagon and shorten them. Place one each side of the tank near the filler cap. Make up another planked board from balsa and place on top of the tank immediately behind the filler cap. Glue two ladders, one each side, ensuring that the tops of the ladders are slightly curved in and the lower ends mounted away from the base by short supports glued to the sideframes.

The milk tank is now ready to paint. The tank can be green, white or black and the base, frame, ladders, walkways, filler cap, release cock, end support bars and wires all black. Finish by adding the code and number of your choice in white on the left hand end of the side-frame.

The four axle boxes left over can now be used to build a 'KF' flat wagon. But that is another story for another time!

The Famous "Black Stump" Layout

Created, designed, and operated by Peter Kelly

YUK! You can't be serious. — A three level HO gauge layout in only 1500mm x 1068mm?

These are some of the more kinder comments put to me when I told club mates that I had taken it to Bald Hills Kindergarten fete way back in 1974. But ask anyone (including modellers at the A.M.R.A. show in 1978) who have looked at it and a shudder passes through their body; they go glassy eyed when they think of the crowds who stopped longer in front of it than at their layouts, and in a funny breaking voice they say "it's different isn't it" and change the subject.

So here fellow modellers, especially you who can't get to see it (who said "lucky dogs") is the history, scenic details and track plan of the layout. Yes, you are right that is not the "Yellow Banana" (which is a "Lima" double diesel) but "The Grandson", my diesel/steam version of the N.A.R. "Coffee Pot", on the 1:12 grade.

YUP! Right again. I musta been madda to builda this; but it works.

I had always held that a simple continuous one piece layout was all that was needed for fetes and, having promised a layout for the Kindy fete in 1974, I measured the inside of the "Mazda" s/waggon I drive, deducted 25mm off front and side figures and this became the layout size.

My kids wanted "A train, tunnels through mountains and a farm" so I decided to combine the lot on this layout. After 25 fetes it is still as popular as ever.

On the piece of 5 ply, (1500mm x 1068mm) I spaced the front track centre 75mm from the front edge at 0mm elevation. I then found that I could put 2 other tracks at 165mm and 265mm centres and still have 375mm curves. (Forget that funny curve at the top left — it moved in the final making). Clearances were normal but I had to have a slope of 1:12 instead of 1:25 to return to 0mm level. I decided a gimmick was born and the trains need only to run down it.

The track drops from 225mm to 75mm in 900mm in the final plan to which this was built. The track passes over a road tunnel hewn out by early Australian convicts to give access to the old prison farm and to nowadays a children's playground or an army camp. (I have just built the army camp as a variation for when I return to fetes where I had been previously. — Don't laugh, two committees asked for the layout to be brought back the following year.)

The farm is an old "Airfix" bungalow and the cows, pigs, horses and 2 people are also "Airfix".

The station is a 450mm x 40mm x 6mm piece of pine, covered with sand and having the bottom part of an "Airfix" signal cabin as the waiting shed. The platform and the shed are fixtures, as are the trees, house and animals.

The "Peco" track is mounted on 50mm x 4mm pine roadbed, ballasted with coffee grains and having the 20mm thick slabs of expanded foam butted to it. This gives the vertical effect of slab walls and the mountains are either from boxes or slabs of expanded foam. The lower tunnel on which rests the army base is made from a slab mounted on a box which had holes in it. The holes give an effect of caves.

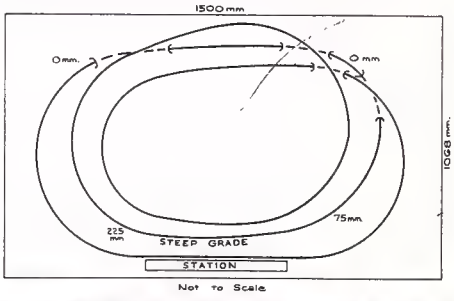
The electrices are very complicated. All joints in the track are soldered and 2 wires are brought out to 2 spring loaded terminal posts. To these is plugged in a transformer/controller for operation.

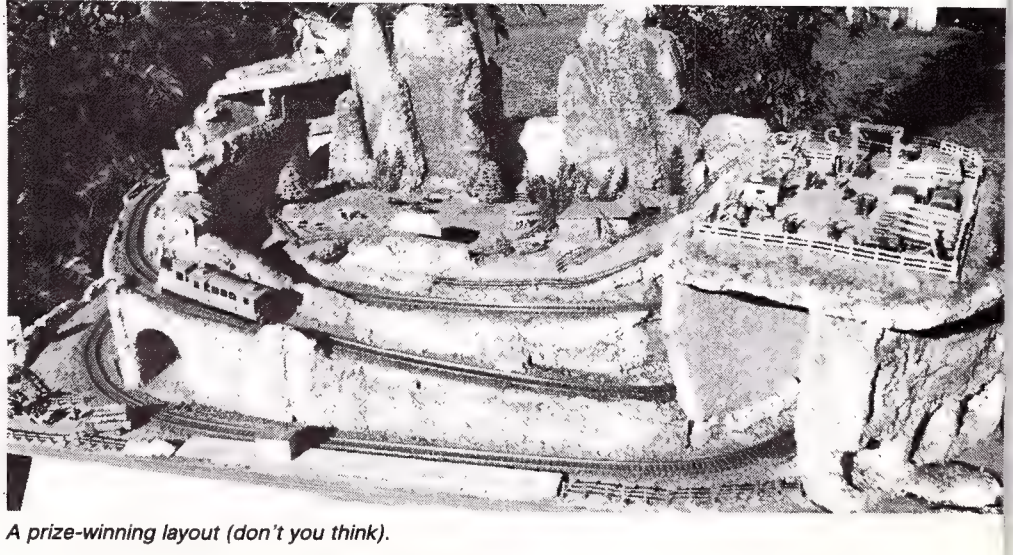
The layout sits on a base 450mm high (right height for little ones viewing) to which is screwed the 4 legs.

On arriving at a fete, the layout is carried in, the 4 legs screwed to the base, the layout sat on, the transformer/controller plugged in to the posts and 240v., the camp or playground sited in position, 6 signs (made from matchbooklets) and the railmotor put on the track. Power on and away we go for the length of the fete.

When the motor takes longer than 50 seconds to lap the layout we know that the tracks need cleaning. This happens only once or twice in 6 hours.

As the sign on the front of the layout says; "The Black Stump layout with its bends too tight, and its grades too steep and its cows, horses, pigs and chooks under the trees, has been delighting kids of all ages since 1974."





A prize-winning layout (don't you think).

The once proud station complex is hidden in a cutting.

A timber overhead bridge carries the road over the rail line.

ABERDEEN

A Modelling Proposition

Located 300 Km from Sydney, in the rich agricultural Hunter Valley is the township of Aberdeen. The railway officially reached this sleepy township in 1870, before snaking northward to the Queensland border. The rail line passing through Aberdeen is officially known as the Main Northern Line, and until the standard gauge line reached Brisbane from Casino in the 1930's all of the Queensland bound traffic passed through Aberdeen.

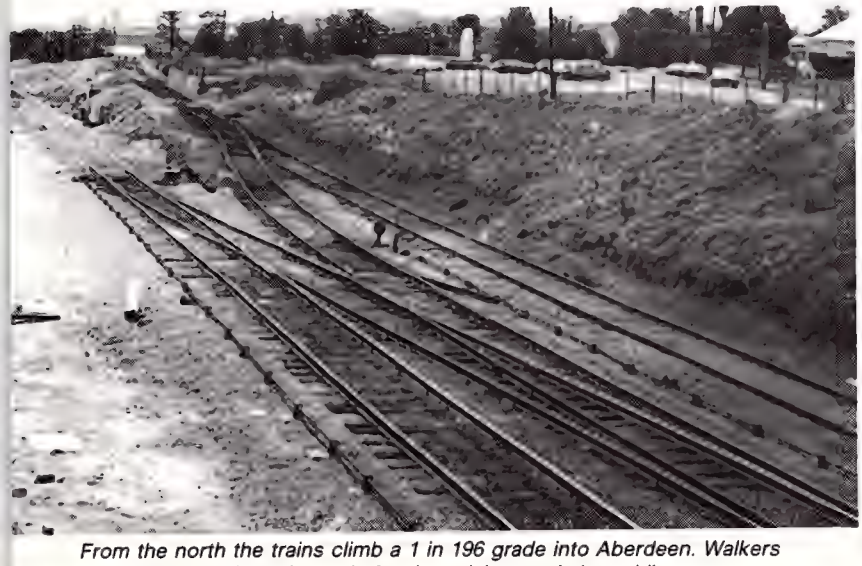
The rail sidings in Aberdeen feed a small grain terminal, a stock race, a loading bank and an abattoirs, which nowadays is the main loading out of Aberdeen.

Walkers, the operators of the meat works, used a number of vehicles to move the fresh meat to the population centres including MRC, TRC and NRY refrigerated vans, but these days use an FMW coded van, which is a special body fitted on an old BSV (bogie sheep van) underframe. The colourful logo on the side of the white painted van is illustrated in the accompanying photographs.

The station complex, which was once a fine kept brick structure, is now a little derelict. The complex of Aberdeen has many features that would be interesting if reproduced in model form.

Roger Johnson

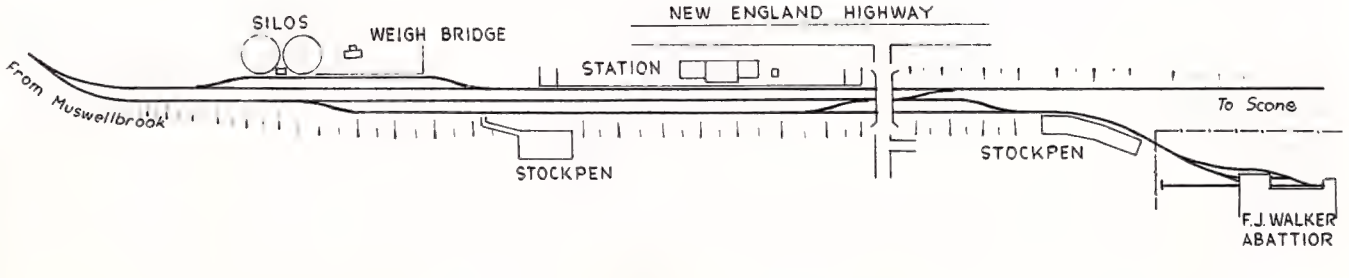
Grain silos and stock race on the Sydney side of the station



From the north the trains climb a 1 in 196 grade into Aberdeen. Walkers abattoirs siding is at the end of a short rising grade branchline.

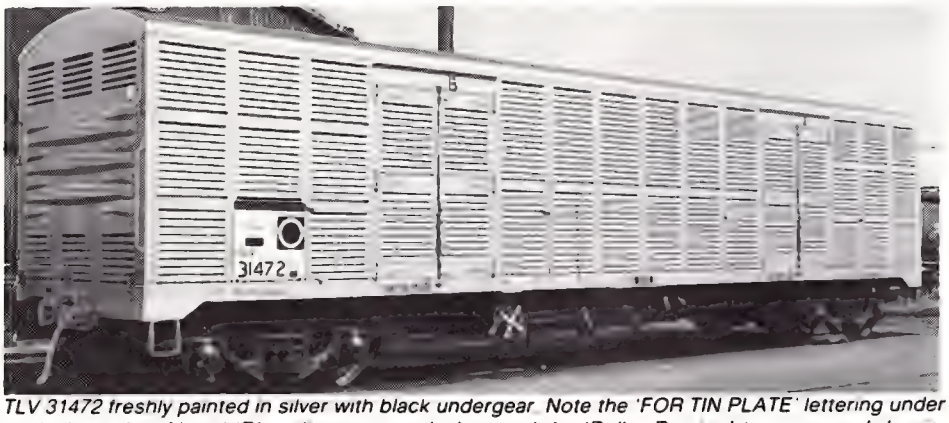
The FMW wagon decorated in Walkers' colours.

A collection of photographs illustrating the Walkers' abattoirs complex.



N.S.W.R. LLV, GLV/GLX, TLV/TLX and CLX Louvre Vans

CLX 5209 at Wauchope in 1979. Photo Bob Gallagher.



TLV 31472 freshly painted in silver with black undergear. Note the 'FOR TIN PLATE' lettering under each door, the 'A' and 'B' coding over each door and the 'Roller Bearing' tag over each bogie. Photo by courtesy of the State Rail Authority of New South Wales.

By Bob Gallagher.

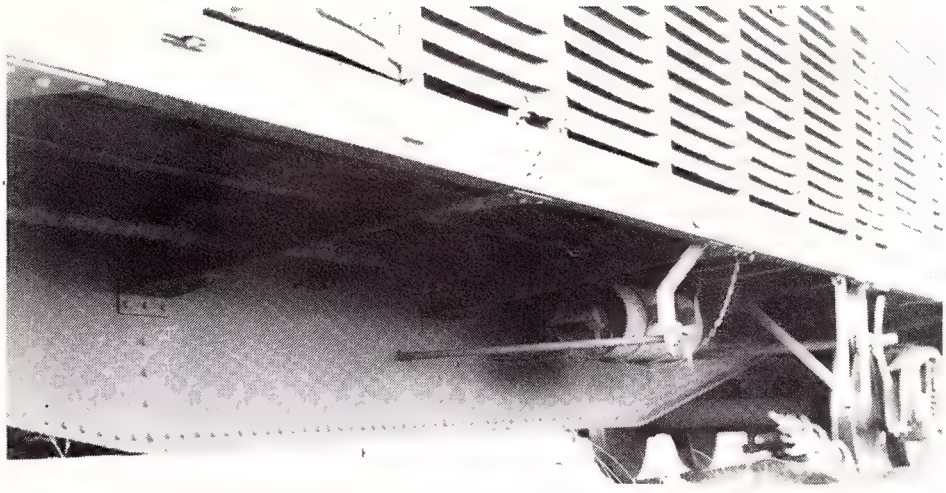
The LLV/GLV style of louvre van must be regarded as the most popular vehicle to model (By HO scale manufacturers) for there has been five versions on the market in the last ten years. Currently the Berg's Hobbies and AR Kits versions are being produced and it is still possible to acquire the MRC version in some outlets, while the Protype model can be found occasionally at auctions and second-hand stores.

In all there were 575 of the GLV/LLV style of van built which were of two distinct styles, and it is surprising to learn that all of the manufacturers have chosen only one of the styles to reproduce in model form. These notes will set out the basic differences in the two styles and provide the details so that modellers wishing to correctly model a period can do so with the material at hand.

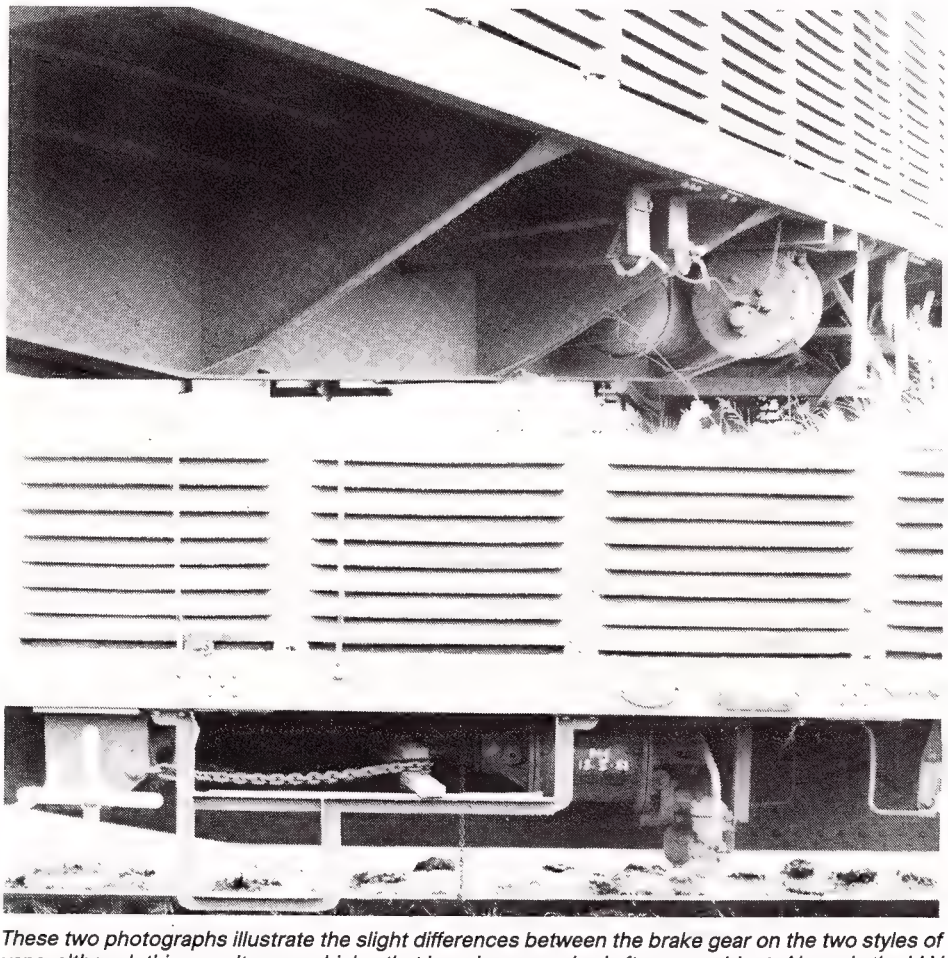
First Group

The 45' all steel louvre van first saw service on the New South Wales railway system in 1951 when A. E. Goodwin commenced assembling components made by Birmingham

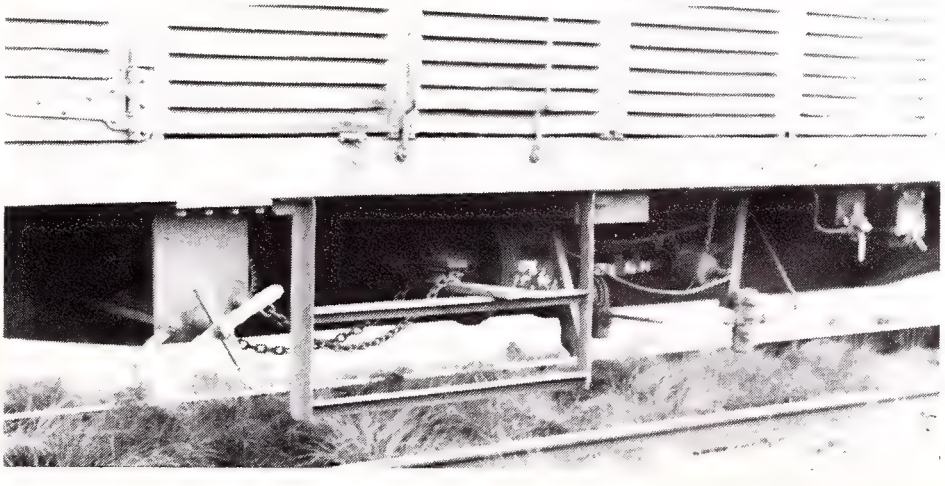
One of the best methods of comparing differences between supposedly similar vehicles is to study them side by side, and photographically is one such method. The (original) LLV style is illustrated above, while the Australian built version is illustrated below by GLX 25475. The first difference is the patterns in the end pressings, the locally made unit having three long sections. Further differences are noted in the sides, especially around the top of the doors, and the LLV has riveted underframes, otherwise the myth that the vehicles are all the same remains. Photos by the author.



These two photographs illustrate the underframe differences between the LLV and the TLV/GLV vans. Above is an LLV van: note the riveted components, the cross section supports and the single air tank. Below is a GLV van: note the deep cross supports, the lack of rivets and the dual air tanks. Photograph by Bob Gallagher.



These two photographs illustrate the slight differences between the brake gear on the two styles of vans, although this can alter on vehicles that have been repaired after an accident. Above is the LLV brake gear and below the GLV style. Bob Gallagher photo.



Carriage and Wagon Co. These 300 wagons were issued various road numbers within the 1173 to 17616 range and delivery was completed in 1953.

The class had two 5'4" x 6'6" doors each side and had semi-louvred ends, the centre section of which is a metal pressing (dreadnought) which features four long pressings. The sleek-lined wagon has a smooth arced roof, and the rivetted underframe with a deep centre sill supported a timber floor. The underfloor support between the side and centre sill was limited to a few shallow channel sections.

Generally all wagons were painted black/grey, but in service they obtained a mid-grey appearance until the PTC came into existence and PTC blue was applied to some vans. Eventually the SRA period saw the red livery come into being.

The 21½ ton vans had a capacity of 40 tons and were fitted with Andrews bogies. Some of this class have been rebuilt to 'CLX' vans (commencing in 1972), and according to the 1969 Carrying Capacity for Goods Wagon book there were 294 in service. By late 1980 the class had diminished to 242 units.

Second Group

In 1958-59 a further 75 units were delivered from the workshops of Tulloch Ltd at Rhodes and were numbered 29425 to 29499 and were coded LLV. They had a tare weight of 40 ton. They were built with a welded chassis and carried a dreadnought shape that became common with many N.S.W.R. goods wagons. They were painted the usual black/grey and the vans had the same livery changes applicable as the first group.

Gradually the class was converted to GLV and TLV coding and then the bogie exchange modification applied to all the class by 1969. Generally this upgrading, where the capacity of the van was lifted to 45 ton for TLV and 47 ton for GLV, was accomplished by the fitting of a stronger floor (in some instances metal) and by strengthening the underframe where the cross struts were extended to the full depth of the centre sill. (Refer to photographs.)

Twenty-eight of this group were converted to the TLV/TLX code, painted silver and used to carry tinplate from the Port Kembla steel works to destinations on the standard and broad gauge. It was common for the vans to travel in groups.

Third Group

In 1961, a contract (2/61) was let to A. E. Goodwin for a further 200 40 ton LLV vans, delivery taking up to 1965 to complete the contract. They were issued road numbers 31361 to 31560. During the manufacture of these vehicles a number of the second and current run of LLVs were modified for heavier work and were coded TLV or GLV. Some units of the latter run were built with the modification and issued to traffic as GLV vans. The first vehicle to be so delivered was 31510 which was issued to traffic early in 1964. The GLV modification increased the tare weight to 47 ton and was externally distinguishable by the deeper floor supports between the side sills and the centre sills.

The conversions/modifications from the LLV to TLV and GLV codes took place in some instances only a month after being issued to traffic, or in other instances eight years later. By 1969 all of the 29425-29499 vans had been modified to either TLV or GLV and all the 31361-31560 (except 31428, 31440, 31448, 31473, 31480, 31482, 31486 and 31508) had been modified and coded either GLV or TLV except the eight vans listed which still carried the LLV coding. These were modified in early 1970 to the GLV or TLV coding.

A further modification that was rather common during this period was to allow bogie ex-

change service, where modifications had been made to the braking equipment to allow easy changing of the bogies. This was only applicable to the already modified TLV and GLV vans, and upon completion of the bogie exchange modification the 'X' prefix was added (GLX and TLX). Some visual paintwork in the form of a large 'X' was added to the top right-hand corner on the side and the left-hand corner on the ends. Up until 1969 this modification was only applied to the 29425-29499 grouping where modified to either GLX or TLX (except 29427 and 29430 which were vacant or a CPX). This, however, was not to remain, for the bogie exchange conversions were to continue into the 1970s. In 1980 there were 221 GLX/TLX vans in service but only 21 of the TLV/GLV coding.

External Differences

The Australian-built vans (29425-29499 and 31361-31560) differed externally to the first 300 vans by the different pressing on the end panel and the position of the brake equipment. The modification to TLV and GLV saw the difference with the underframe.

In the final analysis, when notes and photographs are closely studied it is very obvious that the British-made LLVs differ in many ways to the Australian-manufactured LLV/GLV/TLV vans, and the styles of vans produced by local model makers can represent any of the LLV, TLV, TLX, GLV, GLX codings when run in the specific era.

Usage

The louvre vans were designed for use with perishable goods and fruit no doubt became the main commodity carried. At times, when block trains had not been heard of, trains completely of LLV/GLV vans were common. In later days when interstate trains ran it became common for a train of louvre vans to leave Brisbane bound for Melbourne, and then on to Adelaide via bogie exchange at Dynon. With the standard gauge across Australia the limit of use of the GLX van is endless.

Other unusual uses of the vans, as well as normal freight (i.e. groceries), included the 'trailing' van, or expresses, where a louvre van or two were added to the rear of a train, behind the brake van, and quickly detached at the desired destination (while the train was stationary of course). To enable this mode of express working vans were fitted with marker lamp brackets. Other uses include attachment on mail trains to deliver parcels, and in recent years beer, in kegs, bottles and cans.

A number of vans were used for tinplate traffic from Port Kembla and coded TLV or TLX. These vans became distinct from others for they were painted silver, the general colour of the LLV/GLV/GLX being grey.

The CLX Van

The LLV/GLV style of van has not been the basis of many conversions (Departmental vehicles excepted), but in 1972 a programme was commenced whereby LLV underframes were used as a basis to rebuild a high capacity louvre van, the external style and louvre type being similar to the JLX class of louvre van. In all 13 such vans were rebuilt, all at Cardiff workshops. The programme was slow for only 2 vans were rebuilt in 1972, 2 in 1973, 1 in 1975, 4 in 1976, 2 in 1977 and 2 in 1978, the last one into service in August 1978.

Road numbers include 2774, 5209, 7945, 9878, 10676, 11083, 11146, 11285, 11405, 11491, 11534, 29492 and 29457. Records do not confirm that the road number carried was the same number carried by the original underframe.

As issued to service the vans were painted grey, but are now elligible for the new livery change. They have been used for general goods work, especially for the high capacity, light weight commodities.

Code Change

In 1980 the State Rail Authority of New South Wales (or the New South Wales Public Transport Commission as it was early on in the year) commenced recoding all bogie goods wagons to a four-letter code, the application being so slow that at the end of 1981 it was still common to see three-letter coded wagons. The new codes and the number of wagons in service are contained in the table accompanying this article.

Of the 575 vans built there are still 497 officially in service as at mid-1980. Below is a breakup of the distribution to the various classes.

Class	1980 code	In service 1970	In service 1980
LLV	NLLA	295	242
TLV	NLTF	27	4
TLX	NLTX	29	43
GLV	NLGF	163	17
GLX	NLGX	46	178
CLX	NLCX	13	13

Blue Vans

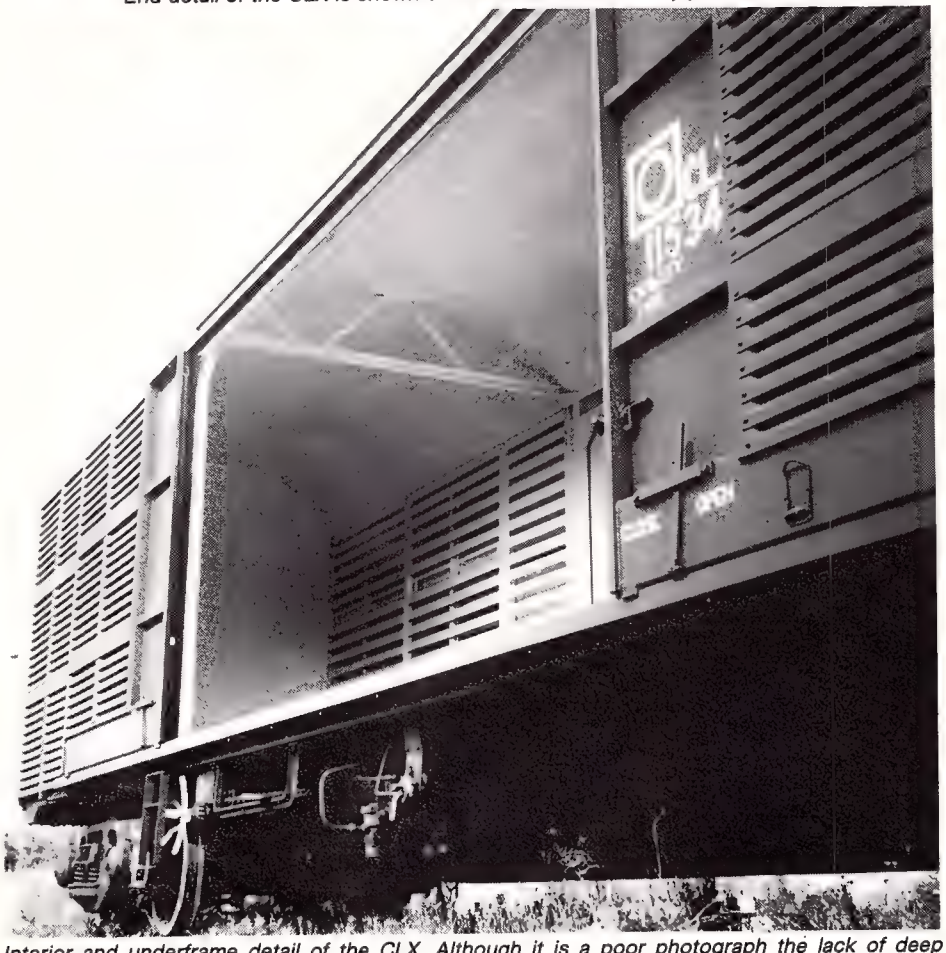
The changing wagon liveries of the State Rail Authority has given the NSW modeller an opportunity to run vans of different hues on the layout. Below are some vans known to have been painted in the PTC blue. All are of the 'GLX' code.

29429, 29431, 29435, 29436, 29439, 29442, 29447, 29453, 29454, 29458, 29459, 29470, 29472, 29479, 29482, 29483, 29487, 29490.

CLX vans in blue include:— 5209, 7945, 11146, 11285, 11405, 11491 and 29457.

These numbers were supplied by Paul Rogers and Tom Kyngdom.

End detail of the CLX is shown on this State Rail Authority photograph.



Interior and underframe detail of the CLX. Although it is a poor photograph the lack of deep underframe supports is noted, along with the evidence of the rivets along the centre sill. State Rail Authority of New South Wales photograph.

MODEL RAILWAY CLUBS in AUSTRALIA

Listed below are the Model Railway clubs active in Australia and seeking new members.

Intending new members should contact the club secretary for further details.

Clubs seeking listing within this column (which will be published yearly in the December issue) should send relevant details to 'Club Listing', SCR Publications, PO Box 235, Matraville, 2036, prior to the deadline of October 1, 1983.

NATIONAL ASSOCIATIONS

Australian Model Railway Association. Federal Secretary: Norm Read, 3 Augusta St., Strathfield, 2135. Active branches in N.S.W., Victoria, Queensland and Western Australia. A bi-monthly magazine is produced along with standards and other information to help the beginner.

Southern Cross Model Railway Association. Secretary: Trevor Moore, PO Box 317, Epping, 2121. Active branches in N.S.W., Victoria and Queensland. A bi-monthly magazine (Australian Model Railway Magazine) is produced, along with standards and recommended practices to assist all modellers of all prototype.

AUSTRALIAN CAPITAL TERRITORY

A.C.T. Model Railway Society Inc. Meetings at College of Advanced Education on the 2nd Wednesday and 4th Thursday of month at 8pm. Secretary: Mr.Pat McQuin, PO Box 28, Latham. 2615. Specialty — HO,OO,N & HOe, North American, Australian, Continental and UK prototypes.

Canberra Model Railway Club Inc. Meetings are held monthly at members homes. Secretary: PO Box 497, Civic Square, 2608. Specialty — predominantly HO and half modelling NSW prototype.

NEW SOUTH WALES

Australian Model Railway Association, N.S.W. Branch. Meetings 1st & 3rd Saturdays (2pm-5.30pm) and 2nd & 4th Fridays (7.30pm-11pm) at the clubrooms, Chapel Lane, Rockdale (Ph.02 591899). Secretary: B.Norton, PO Box 194, Rockdale 2216. Ph.02 7997924 AH. Specialty — all scales and prototypes.

Berrima District Model Railway Club. Meetings 2nd & 4th Fridays. Secretary: Bill Ottey, 72 Merrigang St., Bowral 2576. Ph. 048 613384 AH. Specialty — Mainly NSW but all welcome.

Central West Railway Modeller's Association. Meetings Fridays (7.30pm) at clubrooms above TAB in William St., Bathurst. Secretary: S.Livesey, PO Box 316, Bathurst 2795. Ph 063 312927. Specialty — HO operating layout, any prototype welcome. N scale layout under construction.

Dubbo Model Railway Club. Meetings Tuesday nights. Secretary: Tom Cooper, 24 Royal Pde., Dubbo 2830. Ph 068 828598. Specialty — HO and N.

Dundee Model Railway Club. Meeting days and time in the Sydney area varies. Secretary: D.McNeil. Ph 02 7591431.

Epping Model Railway Club (S.C.M.R.A.). Meetings at 8pm on Friday evenings (2 a month) in the Epping area. Secretary: David Smith, PO Box 317, Epping 2121. Ph 02 865626. Specialty — club layout, HO scale NSW prototype but other scales and prototypes welcome.

LGB Club of Australia. Monthly meetings at members homes. Secretary: Colin Everett, 54 Sommerville Rd., Hornsby Heights.2077. Specialty — LGB.

Model Traction Association. Meetings on Friday evenings four times a year. Secretary: G.C.Maynard, 241 Carlingford Rd., Carlingford 2118. Ph 02 853303. Specialty — Catering for those interested in modelling electric transport and tramways.

Newcastle 'N' Gauge Model Railway Club. Meetings first Monday of the month (7.30pm) at Fellowship House, 141 King St., Newcastle. Secretary: Bruce Harris c/- PO Box 162, Raymond Terrace 2324. Ph 049 434161. Specialty — catering for N.S.W. prototype.

Prospect Model Railway Club. Meetings at 'The Jam Factory', Roper St., Colyton 2760 on the 2nd & 4th Saturday evenings and alternate Friday evenings (8pm). Secretary: Geoff Deitz, PO Box 357, St.Marys 2760 Ph 02 950322. Specialty — Constructing large HO & HOn3 layout, mainly U.S. prototype.

Southern Cross Model Railway Association. Eastern Division. Meetings on 2nd Saturdays of month at members homes. Vice President: Trevor Moore, PO Box 317, Epping 2121. Ph 02 863522. Specialty — All scales and prototypes welcome.

The Model Railway Club. Meetings held every four weeks at members homes. Limit of 13 members. Secretary: Jack Parker, Ph (02) 724 5348.

Warrimoo Model Railway Club. Meetings every Saturday night (except last Saturday of month) at 7.30pm. Secretary: Richard Merchant, 2 Waratah Road, Warrimoo, 2775. Ph 047 536020 Specialty — N.S.W. prototype and timetable operation.

Wollongong Model Railway Club. Meetings every Wednesday evenings (8pm). Secretary: L.Spence, 53 Springfield Ave., Figtree 2525. Ph 042 715386. Specialty — Large HO scale layout, Australian and American prototype.

NORTHERN TERRITORY

Groote Eylandt Model & Miniature Engineering Club. Meetings every Tuesday night (8pm) and Sunday afternoon (1pm) at the Fourex Hill clubrooms. President: Capt.D.F.Craggs, PO Box 647, Alyangula, Groote Eylandt, 5798. Ph 089 871011. Specialty — layout in clubroom, HO Australian, HO Continental, OO British and N American.

QUEENSLAND

Australian Model Railway Association, Queensland Branch. Meetings at the old Refreshments Room, South Brisbane Station, 2nd & 4th Thursdays (7.30pm) and 3rd Saturdays (1.30pm) of each month. Secretary: B.Mawson, 8 Woburn St., Woodridge 4114. Specialty — All welcome.

Gladstone Model Railway Club. Meetings on the 2nd Wednesday of month at clubrooms, end Pavilion at Show Grounds (7.30pm). Secretary: W.J.Hughes, PO Box 47, Gladstone 4680. Specialty — Activities include running club layout on Wednesday evenings & Saturday afternoons. All welcome.

Mackay and District Model Railway Club. Meetings 4th Tuesday of each month (7.30pm). Secretary: Mrs. Margaret Kelly, 54 Kippen St., Mackay 4740. Specialty — Building a HO scale layout but all scales welcome.

Rockhampton Model Railway Association. Meetings at Room 2 Walter Reid Cultural Centre, cnr Derby and East St., Rockhampton 4700. Secretary: G.Merritt, 9 Duffy St., North Rockhampton 4701. Specialty — HO, OO & N scale layouts.

Southern Cross Model Railway Association, Sunshine Division. Meetings on 2nd Saturday afternoon of month at members homes. Vice President: Max Chaseling, 10 Merlin Tce., Kenmore 4069. Ph 07 3784462. Specialty — All welcome.

The All Gauge Model Railway Club. Meetings on Friday evenings at the clubrooms, 51 Whitworth St., Cannon Hill. Secretary: P.Lamb, 23 Beyon St., Wavel Heights, 4012 Ph 07 595179. Specialty — Club has HO, N and Z scale layouts. Membership limited but visitors welcome.

Union Pacific Model Railway Club. Meetings held in the Holland Park clubroom every Tuesday night at 7.30pm. Secretary: A.Wilson, 9 Douglas Rd., Rocklea 4106. Ph 07 2777225. Specialty — HO scale to NMRA standard. Visitors welcome but contact secretary first.

SOUTH AUSTRALIA

Blue Lake Model Railway Club. Secretary: A.W.Balnaves, Mt Gambier. Ph 087 372207 or 087 372239 AH. Specialty — HO

South Australian Railway Modellers Association Inc. Meetings held every 2nd Wesnesday night of the month at the clubrooms on Australian National land at Mile End. Secretary: W.H.Lewis, PO Box 1783, GPO Adelaide 5001. Ph08 3824998. Specialty — HO scale models.

Whyalla Model Railway Society Inc. Meetings every Tuesday night (8pm) at Fisk St., Whyalla Norrie. Secretary: Mrs.J.M.Phillips-Smith, Box 729, Whyalla. 5600. Specialty — HO, predominantly Australian.

VICTORIA

Australian Model Railway Association, Victorian Branch. Meetings on Thursdays nights (7.30pm) and Sundays (2pm) at the clubrooms, 92 Wills St., Glen Iris. Secretary: John Harry, 68 Lahona Ave, Bentleigh East. 3165. Ph 03 574406. Specialty — All scales and prototypes welcome.

Ballarat & District Model Railway Club. Meetings 2nd Wednesday of month (8pm) at clubrooms, Sebastopol Community Centre. Secretary: David Haymes, 21 Regency Drive, Mt.Clear, 3350. Ph 053 321671 or 053 321671 AH. Specialty — Club layouts HO and N modular.

Bayside Model Railway Club. Meetings the last Wednesday of month. Secretary: Les Brown, 35 Brampton St., Cheltenham, 3192. Ph 03 5553294. Specialty — British prototype 4mm scale.

Eltham Model Railway Circle. Meetings Monday nights in clubrooms 'Pineridge', Cherrytree Rd., Panton Hill. Secretary: Ian L.Deans, 19 Tower Drive, Greensborough. 3088. Specialty — HO scale club layout under construction.

Corio Model Railway Club. Meetings every Wednesday (7.30pm) at clubrooms, D.W.Hope Community Activities Centre, The Boulevarde, Norlane. Secretary: Peter Hayes, 48 Larcombe St., Belmont 3216 Ph 052 783315. Specialty — All scales but mainly HO scale.

Glen Waverly Model Railway Club. Meeting Thursdays Ashwood Hall, Jordanville at 8pm.Secretary: Chris Cochran, 5 McKellar St., Bayswater. 3153. Ph (03) 729 7018. Specialty — HO, N and other gauges.

Melbourne Model Railway Society. Meetings held on the 2nd, 3rd, 4th or 5th Friday (8pm) at the clubrooms. Secretary: John R. Gardner, PO Box 105, Ashburton, 3147. Specialty — Large HO/HOn3 layout running VR and other prototypes.

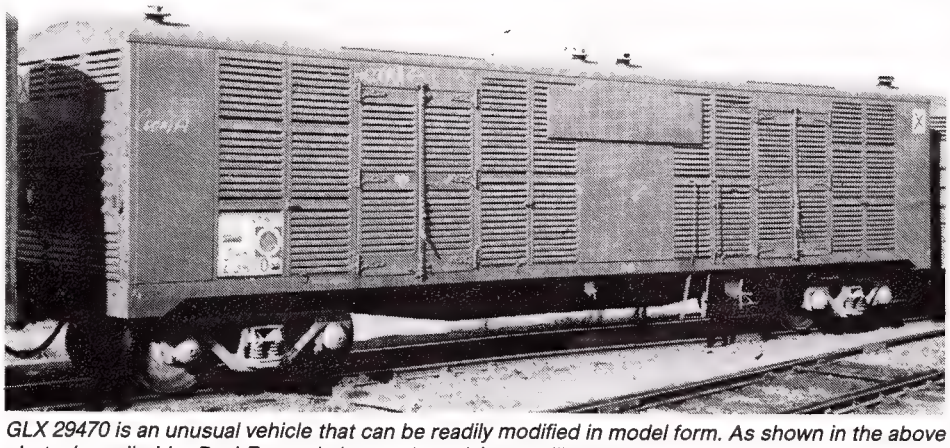
Springvale Live Steamers. Meetings on 1st Wednesday of month (8pm) at Parkfield Reserve Hall, Dunblane Rd, Noble Park, Secretary: John Mills, 79 Oathwaite Rd, Heidelberg 3081. Specialty — Live Steam 31/2 inch and 5 inch gauges at the track, Alex Nelson Reserve, Harold Rd., Springvale South. Running days 3rd Sunday of month 1.30pm-4.30pm.

Victorian Model Railway Society. Meetings 3rd Wednesday of month at clubrooms, Auburn Railway Station. Secretary: Ivor Clift, Unit 12, 77 McCrae Rd., Rosanna 3084. Ph 03 4598906. Specialty — Victorian Railways, scratch building, all scales.

Western District Railway Modellers Club. Meetings are held the 1st Tuesday of each month at 8pm. Secretary: Brian J. Trenery, 56 Younger St., Warrnambool, 3280. Specialty — All interests welcome.

WESTERN AUSTRALIA

Australian Model Railway Association, Western Australia Branch. Meetings at clubrooms, Meltham Railway Station building every 2nd Monday and Wednesday nights at 8pm and every 2nd Saturday at 2pm. Secretary: J.Martin, PO Box 60, Maylands 6051. Specialty — All welcome. ▪



GLX 29470 is an unusual vehicle that can be readily modified in model form. As shown in the above photo (supplied by Paul Rogers) the van has plain panelling over the end panels and centre two panels on both sides of the van. The roof is fitted with 12" Fletner vents down each side. The horizontal panel across the top of the covered in centre section suggests an advertising hoarding but to-date information to hand cannot confirm this theory. The van, in its present form, has been in service for a number of years. It was observed in 1971, heavily weathered, again in February 1977 painted blue and again late in 1977 freshly painted black. Further information re this van (from readers) would be appreciated.

CLX Footnote.

Despite visual and departmental research there seems to be some question as to the exact number of vans built and the correct road number. The main discrepancy is with the CLX 10676 and CLX 10074.

Acknowledgements

Trevor Moore, Graham Ahern and Ian Thorpe, and the Archives Section of the State Rail Authority of New South Wales.

References

Freight Vehicles of Public Transport Commission of NSW. Carrying Capacity of Goods Wagons, Horse Boxes, etc. 1969 and 1955. Railway Freight Wagons of New South Wales by John Beckhaus. Various State Rail Authority reference sources.

PROTOTYPE PLAN & PHOTO INDEX

An index of prototype plans and photographs that have appeared in A.M.R.M. issues 1-111 is available from S.C.M.R.A., P.O. Box 317, EPPING, 2121. Please send two 27 cent stamps to cover cost of index and return postage and envelope. Please print name clearly.

N.S.W. VEHICLE COUNTDOWN — 28

In 1955, the N.S.W.G.R. had 110 'B' type open wagons in service. Today, this class is excluded from revenue-earning operations.

Paul Rogers

GWABEGAR GOODS SHED

Peter Mackenzie

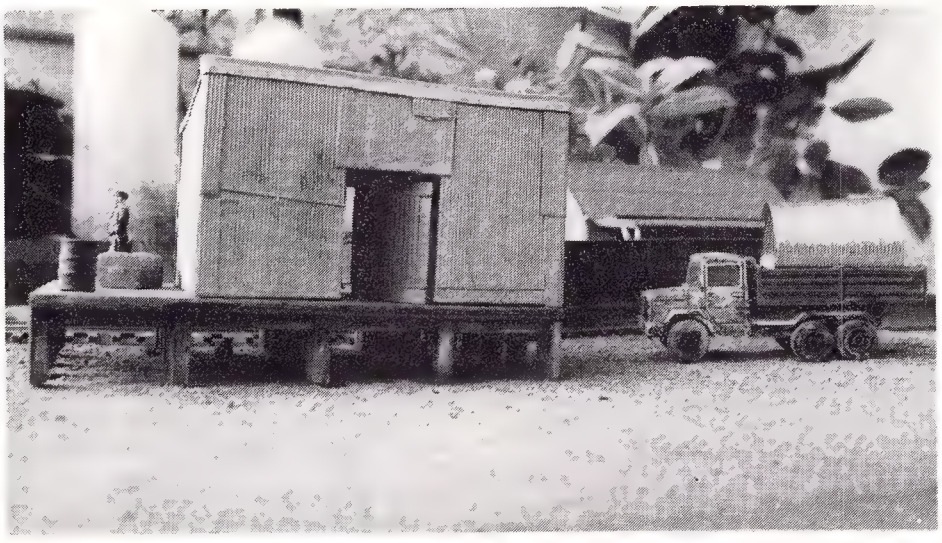
Gwabegar is the terminus of a branch from Binnaway, in the north-west of New South Wales. When I was there, in April 1979, the only buildings were the Goods Shed, a derelict Station and a timber cutting plant. The only rolling stock was several FO carriages, being used as farm sheds, and a number of condemned TRC refrigerator cars.

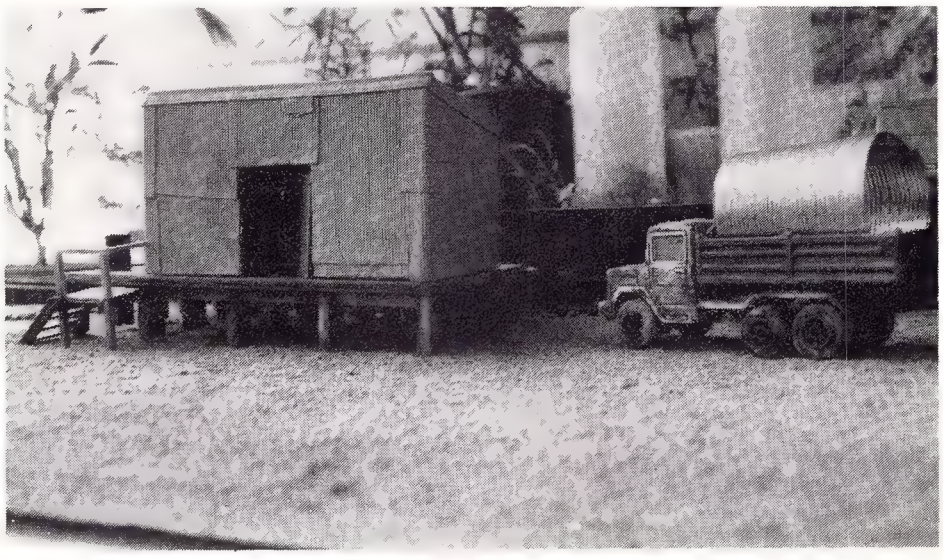
The Goods Shed appears to be the smallest, simplest, type of goods shed in use by the PTC (I'm prepared for correction). I will eventually use it in a simple country setting with an equally basic station, silos and perhaps, a nearby schoolhouse, church and little else but natural surroundings.

Materials.
Thick card — for inner walls and roof.
Corrugated iron — for walls and roof.
Roof capping — for the back roof-wall and side roof-wall joints.
Scribed planking — for the platform.
North-Eastern channel — for the guttering.
I used Duncan's products for the iron, capping and planking.

Construction.

Card walls were cut using a small engineer's square, scale rule and a scalpel type knife (take a finger count). The roof was similarly cut and corrugated iron was then applied using Bear Brand contact cement. Any surplus on the outside of the join can be removed with a brush dipped in turps. Remember to work from the bottom up when using corrugated iron and include the overlap of the sheets.





These photos show the model, in place, on the diorama. The truck is a Majorette model, weathered with real dirt, eventually intended for coal haulage.

WESTRAIL WAGON RECODING

Continued on page 42

coding between October 1979 and May 1981.

WMX/WMB Motor Vehicle Transporters — recoded to WMFX/WMGY

The WMX transporter was available for general bogie exchange service, often being sighted in the company of similarly styled units belonging to the N.S.W., Victorian and Commonwealth systems. All but three WMX cars had been recoded to WMFX by April 1982.

The sole WMB class tri-level automobile carrier received the WMGY classification during September 1980. It is restricted to operations west of Port Pirie.

Acknowledgements

Thanks are extended to Mr G. Brackley, Research Officer, Australian Railway Historical Society (Western Australian Division), for his help in the preparation of this article. I am very grateful also to the staff of the Westrail, and the Chief Mechanical Engineer at Midland Workshops for the supply of relevant data.

References

1. Australian National Railways (Central Region) Weekly Notice 32/1980; p.371
2. Letter CME.66/2990 "Westrail Freight Vehicles available for Intersystem Operations" from Westrail to the author, 14 March 1979.
3. Letter "Western Australian Freight Vehicles suitable for Bogie Exchange Operations" from the Australian Railway Historical Society (W.A. Division) to the author, 27 September 1978.
4. Westrail Weekly Notices: 1979-1982 (various issues).

ROWEN

Continued on page 42

are painted Floquil Caboose Red inside and out, with dark brown (M 29) roofs and handrails, handles, below the floor and other details in black.

All together I am very pleased by the way the goods stock has turned out.

Conclusions:

The layout is as yet incomplete, probably because it has not been around for even twelve months. Once this article is done I'll think about drawing up a timetable. Trees, people, vehicles and signalling still need to be added. As (if?) VR locomotives become available the stud will be improved, but will not be enlarged very much. The coaching stock also *must* be improved.

The following is my logic for using Kadee couplers. Think about it.

— I knew most things would need to be kit or scratch built, or converted, so couplers would need to be bought anyway. Many of the backyard products are designed for easy Kadee installation (eg. the GY's). Especially on a small layout they would not be expensive, and they are not as hard to fit as many would have us believe, *and* they work well. — There.

I would also suggest that everyone gets at least one model railway magazine regularly and scrounge up as many recent back issues as possible. I subscribe to Airfix Magazine and Model Trains, and regularly get Continental and Railway Modellers, as well as AMRM. They keep you poor, but look what I've learnt from a meagre 300+ magazines!

The layout should be finished this Christmas holidays 1981 (just before 6th Form!). Thanks for ploughing all the way through this, I hope you enjoyed it or learnt something from it, and good luck with your interest.

Special thanks to Joyca Hobbies (see directory at back) who do their utmost for the polite customer, and the man behind it, Terry, who even though he tried to discourage me from modelling Australian because of the impracticalities, helped and encouraged me once he realised that I was determined.

The walls were glued together using UHU glue (clear) although white glue could be used. The roof was then added with roof capping along the back edge. The basic box was then painted grey with a dash of Floquil Grimy Black. When the paint was dry several thin washes of black/grey were used for further weathering.

The card cut from the door openings was covered with scribed wood centres, door frames were also made. The door and frames were weathered with isopropyl alcohol/shoe dye mixture.

Construction of the platform and piers was time consuming. I had no wood of the correct size for the piers and I had to split lengths of balsa.

The scribed platform was cut to size and then stripwood beams were run underneath using aquadhere. Each pier is made from three separate pieces glued to the beams — that is 75 pieces in all.

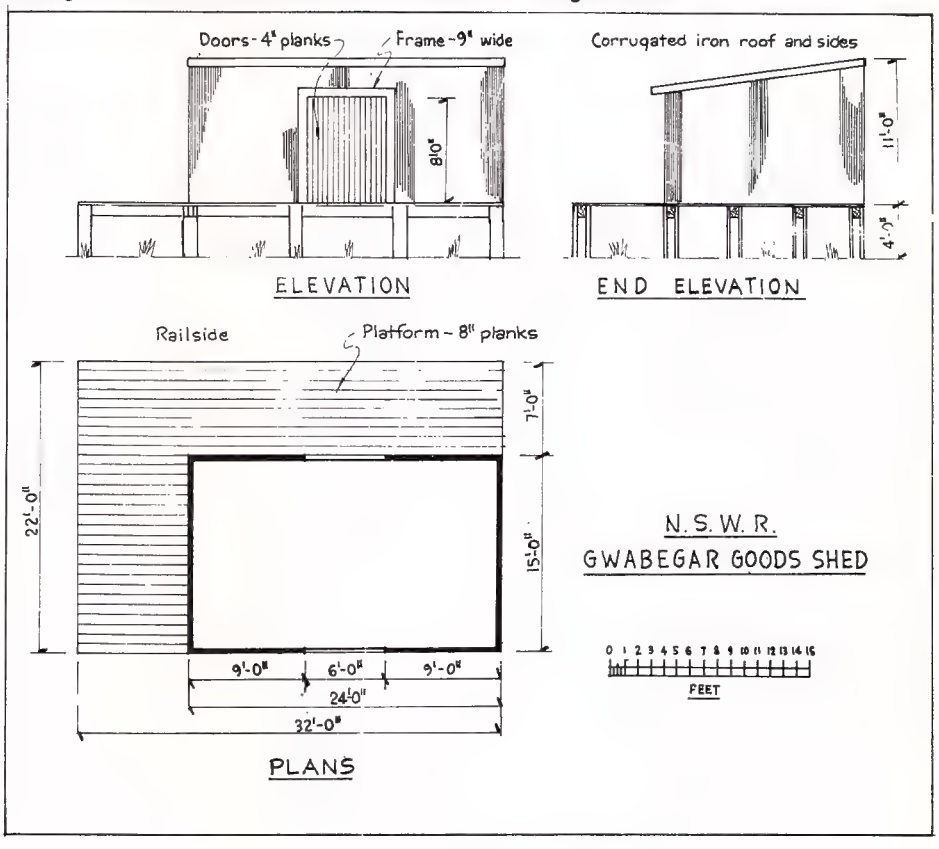
Weathering.

My technique for weathering wood is American inspired (RMC — Wayne Weslowski) but modified to my own system. The toner is made by mixing a few drips of black shoe dye with a few "mls" of alcohol (available from chemists — it is usually called rubbing alcohol).

The American method is to pre-paint the model with a thin coat of colour and then wash with the toner. My own method is to brush on the toner first and then paint over with a thin coat of colour. For heavy weathering lightly rub portions of the boards with very fine glasspaper; I use No. 1000. This removes sections of paint and reveals bare, weathered, board. This is easier to do if you first have a look at an old weatherboard house — the type that hasn't seen fresh paint for many years. Variations depend on which sections are protected by the eaves etc.

For the present, with no layout, I placed the shed on a small board and gravelled this board using the diluted aquadhere, water spray, detergent method. I used a light brown gravel (from a riverbank) for earth and a grey (ballast from Ardglen) for roads.

Gwabegar Goods Shed with a rake of condemned TRC refrigerator cars.



THE GREAT NORTHERN RAILWAY

In 1901 when the Commonwealth of Australia was formed, the Northern Territory became a political football between the S.A. Government and the new Federal Government. This disturbing activity was the final straw for the people of the Northern Territory who decided to do something about it for themselves. In 1908 after one of the greatest legal battles in Australia's history, the Northern Territory seceded from the Commonwealth and became the Province of Capricornia.

During the next twenty years, in the face of much opposition from the rest of Australia, the Province quietly consolidated its position. The pastoral and agricultural industries expanded, and large deposits of minerals were discovered. By the late 1920's Capricornia was on the way to prosperity. It was obvious that to gain this prosperity the ailing 3'6" gauge railway would have to be overhauled in a major way. The Province's Administration asked Mr. W. A. Webb, the Commissioner of Railways in South Australia, to move to the Province for the rehabilitation, an offer he accepted in May 1930.

He first convinced the Administration to scrap the 509 km. narrow gauge railway and start anew with a 4'8½" standard gauge system. Over the following years a magnificent system was built covering most of Capricornia and interchanging with the Commonwealth and Queensland Railways at the border towns of Kulgera and Camooweal respectively. A special agreement with the W.A. Govt. allowed the Great Northern to service the Ord River region of Western Australia.

Tourism was and is, a major industry in the Province, it was therefore decided that the railway, apart from being a paying transport system should itself be a tourist attraction. So what was first an economic expedient of purchasing secondhand locomotives and rolling stock now became a set policy. It is now possible to see ex V.R. X class 2-8-2 loco's beside an ex N.S.W.G.R. D55 while G.M. diesels wait to refuel!

Although this sounds like an engineer's nightmare, it actually has been welded into a well organised and economic railway system, the envy of the rest of Australia. Darwin is now truly the front door of Australia and the Great Northern Railway sees most of what comes in and goes out.

The above of course, is pure fiction (for the real story of the Northern Railway read The Line That Led To Nowhere by I. R. Stevenson) but it gives a plausible excuse and setting for my freelance? layout. The time setting is about 1960-65 which gives a good range of diesels operational and yet does not make the steam locomotives too old.

The fictional Province also allows me scope for my other modelling hobbies: aircraft and military vehicles. The Province needs air transport, a small military and air force for border and maritime surveillance as well as customs work. The freelance nature of the setting allows the purchase of equipment from many sources; equipment that in real life probably does not get used together.

It can be seen that although freelance, the Province gives a connecting aspect to all my modelling. The armchair modelling of the Province is just as much fun as the actual modelling, as decisions have to be made, within economic restraints, on what the Province will buy or build next. If you think this all sounds like a budding megalomaniac trying to start his own country perhaps it is, but then isn't everyone who builds a model railway doing just that.

For those who would like to try their own; in 1859-60 the people of Portland unsuccessfully attempted to secede the western part of Victoria and a section of the South East of South Australia. This would have formed a new colony to be called Princeland with Portland as its capital. Although this attempt failed it is interesting to ponder on the outcome had it succeeded.

A D59 Conversion . . . In Part

by Fred Schmidt

I was disappointed when I heard a rumour that neither Lima nor Jouef now plan to produce a D59 class loco. I was left to either wait for a brass model or build my own. I chose the latter course and converted a Lima Mikado. Although the loco is not yet completed it performs well and I am pleased with the result. The conversion was done in several easy steps and inexperienced modellers should be able to manage it.

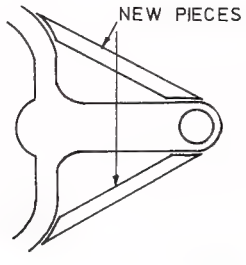
The items I bought were a Lima 141R oil fired Mikado — it has the correct drivers — (or the Americanised version lettered for Santa Fe) and Greg Edwards' Data Sheet of the D59. The rest came out of my scrapbox; a junked Rivarossi Bettendorf bogie, discarded parts from the Workshop 5 C38 conversion kit, a few pieces of styrene in 10, 20 and 40 thou., MEK and superglue. The loco, as produced, is 12 scale feet too long; after conversion it is 4 scale feet too long but is still able to negotiate 20'' radius curves.

Loco/Tender Coupling

Cut 6mm out of the coupling, file the new end to a half-round shape and drill a new hole for the coupling.

Trailing Truck

Take a piece of 40 thou. styrene 3.5mm wide and 36mm long, cut this in half and cut and file into shape to fit the trailing truck, then glue the pieces in position with superglue (see Fig. 1).

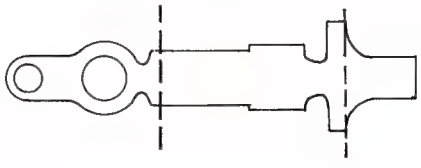


①

Cut off the roller bearing axle boxes and replace with those from the Rivarossi bogie. Finally paint the styrene black.

Pony Truck

Remove the pony truck from the loco and take the wheels off the axle. Take one of the Rivarossi wheel sets and remove the wheels from the axle. Cut off the plastic spacers and drill 2 holes in the wheels with a No. 76 drill. Push one of the wheels onto the axle and secure it with a drop of superglue. Remove the coupler extension and cut the pony truck in half (see Fig. 2). Then file the underside of the rear and the top of the front end shimming. Put the rear end over the top end with 5.5mm overhang and glue with superglue. Put the axle back into the truck, push the other wheel on, check for back-to-back spacing and secure with superglue. The loco's wheelbase should now be 121.5mm.



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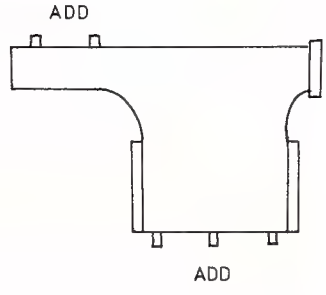
Cylinders and Valvegear Hangers

Remove all the cast-on detail from the cylinders with the exception of the rivets and the two downward pointing draincocks. Glue an additional cock in between these two. Remove portion of the valve housing and ½mm of the valve-housing front (see Fig. 3). Cut two pieces of 10 thou. styrene to the shape of a 4mm circle (see Fig. 4) and add eight nut impressions, then glue them on to the valve-housing front. Make the strips that are to be added from ½mm × 20 thou. styrene.



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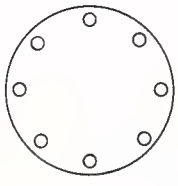

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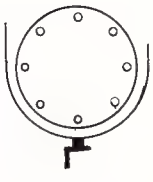
The mechanical lubricator sits on these strips on top of the right hand cylinder — as seen from the front. Remove the Lima lubricators from the rear of the valvegear hangers, glue them together and glue them on the valve-housing in the position shown in the 59 class drawing.

On locos 5904, 5909 and 5920 the cylinder draincocks were protected against dirt by a metal angle. I made this angle from two strips of 10 thou. styrene 1.5mm wide and 12mm long. I filed out the draincock position and glued the angles in place (see Fig. 5).



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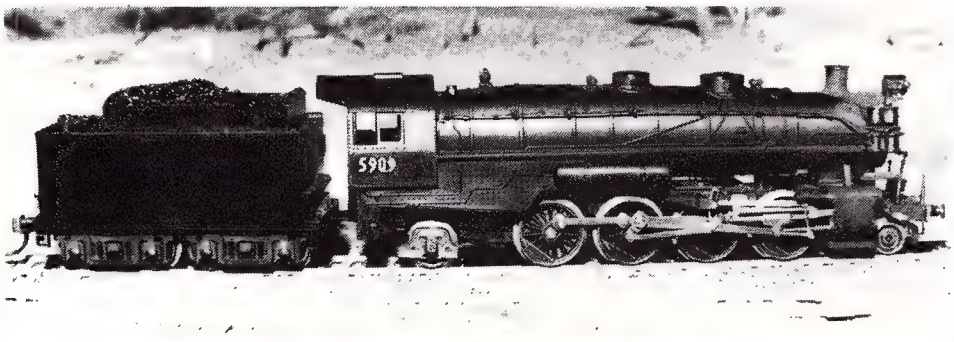
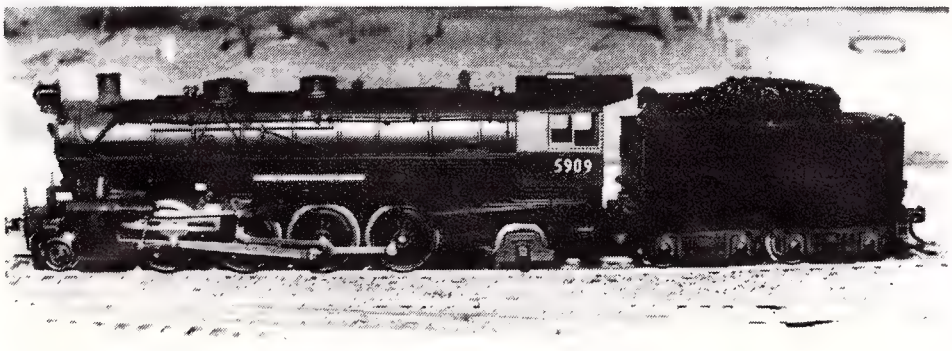




Pilot Deck

Cut this off from the centre of the hole just in front of the smokebox saddle. Shorten it by 11mm and reduce the buffer beam to 32mm. The deck should be reduced to 31mm. Plug all the holes with 40 thou. discs and sand them down to 2mm thick. Cut a piece 1mm deep and 7.5mm long from the centre of the underside of the buffer beam for the coupler pocket. Glue the pilot deck back into place and strengthen the join with a piece of 40 thou. styrene glued to the underside. Correct buffers are made by Protype and FSM; when they are glued in place paint the buffer beam red.

Tender

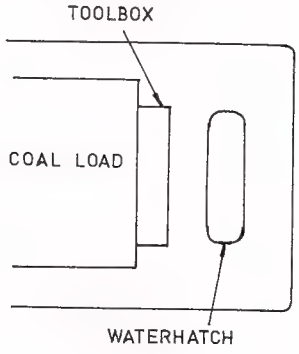
Cut the rear end of the 38 class tender underframe 39mm from the buffer beam. Cut the front end off 38mm from the front and sand down to 38.75mm and 37.5mm respectively. Close up the bogie pivot holes with 40 thou.

styrene discs and cut new holes of the same diameter taking their position from the 59 class drawing. Glue both ends together with MEK and strengthen the joint with 2 strips of 40 thou. styrene.

Remove all wheels and hardware from the Mikado bogies and then re-assemble them using the 38 class bogies. Make a current collector from a strip of shim brass and fit the bogies to the new underframe.

Remove the tender back platform from the tender body and cut out one water hatch, sand it down to ¼mm thickness. Cut off the tender coal space, to the same height, at the tender rear and remove the coal load carefully. Sand down the tender sides and ends to 28.75mm, cut out 21mm of the tender body length and glue the two pieces together with MEK. The length should now be 70mm and it should fit exactly onto the shortened underframe.

Sand off all end and side detail and make the corners more round. Cut a 4mm wide, 40 thou. strip 95mm long, then cut it in half and glue to the inside of the body from the front 1.25mm below the top. A 17mm × 32.5mm, 40 thou. piece of styrene goes in the back of the tender at the same height as the side pieces. Now from 20 thou. styrene cut a piece 10mm wide and 54mm long, cut this in half and cut the top corners off as in the Data Sheet drawing of the tender rear (coal type). Cut another piece of 20 thou. styrene 7.5mm wide and 98mm long and cut it in half. These are the coal bunker sides and are glued inside the coal bunker ends. Glue them on top of the tender deck 4mm from the tender front with 3.75mm equal spacing from the tender sides. The coal load should now fit against the front and sides but is 4mm too short in the rear. Close the gap with a 40 thou. strip of styrene and build the coal load up from coarse sand. Cut a piece of 40 thou. styrene the size of the water hatch, less ½mm all round. Glue the water hatch on top with an even overhang and then glue this onto the tender deck with a 1mm gap from the inside of the tender rear (see Fig. 6).



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Toolboxes were standard on NSW locos, and as far as I know Protype make them. Glue it with superglue onto the deck (see Fig. 6) and paint all the new work on the tender black and the buffer beam red.

Smokebox and Boiler

This is only temporary but completes the loco for the time being. The Santa Fe smokebox door is virtually identical to the oilfired 59. Remove 10mm from the front of the footplate and, with a bit of 40 thou. styrene, make the steps as per the drawings. Alter the handrails as per the drawings and drill holes for a Sentinel headlight, cross-compound pump and front marker lights. Move the air cylinder forward as per the drawings and make another air cylinder from a casting sprue. Remove some piping from the other side, underneath the footplate and fix the new cylinder in position. Fix the headlight, pump and marker lights in position and secure with superglue.

That is as far as my loco has advanced; quite a lot still remains to be done including altering the tender to take a Kadee coupler. The main jobs of altering the boiler shape, repositioning both domes, building a new cab, shortening the piston rods by 2mm and so on will take a while but these can be achieved too.

AMRM NEWS

As last issue went to press we at AMRM were feeling a little pleased with ourselves for we had been able to achieve the utmost with the reproduction of some high quality photographs (47 class). On top of this we were on the verge of a technological change that would eventually give us better control over the typesetting of the magazine and eventually make our task of producing the magazine less time consuming and easier.

Unfortunately, as it happened, last issue contained a few errors that could tag it as one of our worst efforts. There were a few typographical errors that crept into the typesetting stage of production and, unfortunately, were missed in the proof reading. Yes, we once again managed to have Gorre & Daphetid incorrectly spelt, and we once again apologize, especially to David Dunn who could have been incorrectly credited for the error.

Our worst mistake however was the transposition of pages 44 and 45. Page 44 should be read as page 45, while page 45 should be read as page 44. This error happened despite a time consuming checking task.

We can only apologize to our readers for the unintentional errors.

Progress.

As indicated in the Comment column, we are constantly striving to improve AMRM within our capabilities and the time available, and a step up the ladder of progress is the installation of micro computers into the production process. In actual fact the micros will be used primarily as word processors, and the text, on disc media will be fed directly into the typesetting computer. The result should be typesetting that costs less and is more accurate (i.e. without typographical errors).

The expected high accuracy will be brought about by the use of a spelling check (on the micro computer) that will inform the operator of an incorrectly spelt word/s. At present the spelling programme to be used is American and will have to be altered to cater for local spelling. Once this has been accomplished and our operators fully trained to the equipment and become fully conversant with typesetting commands, we can look forward to (hopefully) seeing less errors within AMRM, and maybe a little spare time for modelling.

Thank You.

To research and dig up sufficient detail on the process we hoped to use for the micro computers was not easy, and it would not have been posssible without the support and patience of a few individuals inside and outside the hobby. Our special thanks to Bill Bolton for his patience and direction, to Ray Batty (of McBees) for his support, to Graham Campbell and Don Hanks at Photoset Computer Services (our typesetters) for their patience and direction in a new field. Others to be thanked include Paul Tilden (of the Sydney 'N' Gauge Model Railway Club), and finally to AMRM workers Trevor Moore and both John Caseys (yes we have two of them, and they are not related) all of who have spend many hours chasing information and prices.

In some ways it may be too early to be confident of the success of the new process for although we have prepared many articles for publication only a small section have been set into format for publication. However once all our machinery is delivered, hopefully before this issue goes to press, we will be into the full swing of production. This will be verified by the publication of this column which is being fully prepared by the new process.

If by chance any reader is interested (commercially) in further information on the typesetting procedure by disc or by telephone modum, contact Don Hanks at Photoset Computer Services (02 264 7077) or read the September 1982 issue of YOUR COMPUTER magazine, which not only details some of the technology available at the present time, but also looks into the future on communications and computers. Computers can no longer terrify us, for the computer revolution is happening now.

Advantages with Computers.

There are many things that can be achieved with computers, and no doubt as we acquire experience we will implement many of them. One of these however will be the listing of model railway clubs. At present we are compiling this list for publication and we only have 33 clubs to date. While this is about the same as last year we KNOW there are more than 33 active model railway clubs with open membership in Australia.

One criteria we insist upon is that the clubs inform us of their details, which is a form of giving us permission to print what could be private details. With the computer we intend putting clubs onto a listing so that it can not only be updated constantly, and accessed for prospective members all year round, but form letters can be sent to club secretaries to inform them of the publication deadline date. Further details of this service will be advised as the programme is implemented.

Promotional Council.

Further to the initial mention (October issue) of awards to encourage the construction of exhibition model railway layouts, the discussion on the idea has progressed and an informal meeting was held on the Saturday evening of the Sydney Model Railway Exhibition at the Showground. Interested people from the retail trade, manufacturers, clubs, associations and exhibition organisers were present.

Discussions indicated a broad-based support from all sections of the hobby to enable a co-ordinated approach to the promotion of our hobby to the public and existing modellers, both active and armchair. To this end a proposal for a Model Railway Promotion Council of N.S.W. is being formulated. This would give equal emphasis to direct promotion by brochures and media coverage and to encouraging the construction of exhibition standard layouts of all scales, gauges and prototypes.

The foundation meeting to set up the Promotion Council has been set down for Tuesday December 7th at Ryde-Eastwood Leagues Club, 117 Rydedale Road, West Ryde (eastern side of Railway Station) commencing at 8pm. Attempts are being made to circulate information to interested parties. A general invitiation is also extended to any person involved in the hobby to come along to this meeting.

Financing a project such as this is always a problem and generally a stumbling block. It is pleasing however to advise that David Anderson of Mansfield Hobbies has offered a brass HO scale C38 locomotive as a prize in a guessing competition, which will be run with tickets costing $2 each, limited to 500. Further to this John Easie of Trax Model Products has offered a brass HO scale Z13 class loco as a prize for a guessing competition to be held at the Birkenhead Point Exhibition at the end of January,1983.

Australia Wide?

There is a need for the abovementioned participation to be involved all over Australia. It is up to individuals in the various states to co-ordinate meetings to set the ball rolling.

While on the discussion, why not give some thought to turning the Promotion Council into a Guild of Australian Railway Modellers, the participation of Clubs, Associations, Manufacturers, Importers and Hobby Shops being involved. It could not only run the Promotional Council but also co-ordinate Australian meets such as conventions, etc, etc,.

Binders for AMRM.

Just two years ago the boys at the Southern Cross Model Railway Association took a gamble that other AMRM readers would be as interested as them in keeping their magazines in binders. A special order of 250 magazine binders were manufactured and the demand was so encouraging that further orders were required to cater for demand. A total of 1750 binders have been made and used by AMRM readers.

Continued on page 54

The 1982 Sydney Exhibition

Reviewing exhibitions is a difficult task, where does one start? Hometown exhibitions are, for the modeller, often a case of who is there, rather than what is there.

There must be many readers who, like myself, have not seen a Sydney exhibition for many years, if at all. On this basis I hope to take the who out of this review, and look at it as a member of the modelling public.

The first surprise came when my hosts announced that we had to be at the exhibition at opening time for the specials. So off to the showgrounds to be there as close to 10 am as possible. Then straight past everything to the Casula Hobbies stand. A quick check of their showcase, and a look at the list of specials on the wall, then join the throng waiting to get served. I was sorely tempted myself, but a 'K' wagon with water gin would look out of place on a VR layout!

Apparently this opening rush has become something of a tradition, amongst modellers "in the know", who come equipped with bags to carry home their goodies.

After having witnessed this pilgrimage, I decided to leave my hosts, and see what was to be seen. So back to the entrance and start all over again.

The exhibition guide showed that there were 54 stands in the two halls, and an electric tram running outside.

Commercial stands sold both new and second-hand equipment in scales and gauges ranging from "N" to "Gauge 1 live steam". Locomotives and rolling stock, Match Box cars and magazines, calendars and wall plaques, at prices from a few dollars to six thousand.

On the layout scene, there were four which seemed to attract the public more than the rest.

The everlasting and always popular 'O' gauge layout of Norm Read and Col Shepherd. What more can be said about this layout, that hasn't already been said?

The Wells St layout with almost continuous movement, was a very difficult area to get past because of the number of people trying to see it. Perhaps the aisleways could have been just a bit wider, to allow for such bottle-necks.

In the Ford pavilion the Rio Grande MINILAND was also very popular, the small size of the locomotives and rolling stock attracting attention. Despite the small size they seemed to have less trouble than some of the larger models.

The layout that always had the greatest number of people around it was the "EM" gauge layout 'Lulworth Cove". The running commentary caught one's attention and held it. until the sequence was complete. Telling the public exactly what was happening, and what to expect next, is a good idea. I really feel for those who narrated for three days.

There were of course many other fine layouts, but after five hours, they were overwhelmed by those four. Other items did stand out as things not to be forgotten: the effective use of video equipment on some stands. the labels on the edge of a layout explaining the prototype origin of the various models on the layout, etc.

Long trains sweeping down the North Shore layout, and the long wait to see a train go over the Hawkesbury bridge. This layout would seem to have too long a run for the operators to be able to control. Perhaps some form of automatic control would assist, to enable two trains each way, to give the public something to see at all times.

One of my personal gripes, about exhibitions in general, is the number of "static" layouts. The general public wants to see trains RUN. It doesn't seem to matter who fast, as long as they keep moving. The popularity of Wells St, LGB displays, and the 'O' gauge seem to veryify this thought.

From a modeller's point of view, it was a good exhibition, with lessons to be learnt from EVERY layout.

Passouts were available, which meant that I was able to have some lunch, and then return to the exhibition for a second session. The organisers did read AMRM! Other exhibitions please note.

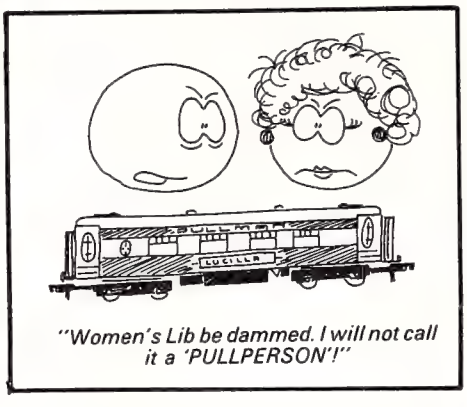
My thanks to all involved in the exhibition, who by being there showed me more layouts than would otherwise have been possible to see in a weekend.

Phil Jeffery.

Part of the gorge scene on the HOn2½ scale Rio Grande layout on display at the exhibition. The virtually faultless running and the colourful scenery gathered the crowds over the weekend. Bob Gallagher photo.

Minute detail is one aspect of an exhibition layout that many of the viewing public appreciate. The above scene, once rather common in Sydney, was part of the scenery on the Wells Street layout. Photo by Bob Gallagher.

Wells Street, is a layout that typifies continous railway movement at its best. This scene however is part of the static display that hides the numerous railway tracks below. It is the Cleveland Street overbridge with the typical, for some of us, tram scene. Bob Gallagher photo.



"Women's Lib be dammed. I will not call it a 'PULLPERSON'!"

PHOTOGRAPHICALLY SPEAKING

CONDUCTED by Leon Oberg

This issue we again bring you some photographs from Peter Watts' trip to Tasmania in 1974. Other photos of Peter's appeared in the June 1982 issue.

These two photographs illustrate the large and the small on the Tasmanian Region of Australian National, which at the time the photographs were taken was operated by the Tasmanian Government Railways.

I would like to see a few more spreads like this from readers and all I ask is that pictures are clean, not too dark — nor too small. Camera and film details may also accompany the contributions, along with suitable captions.

Above: VA1 shunts Hobart shed.

READERS PICTURE PAGE

Below: AN rail's biggest power in Tasmania are the English-Electric Z and Za class units, both of which are represented here, slumbering in Launceston depot. In the foreground we see Z2, whilst with it is Za4.

MAIL BAG

Sir,

In reply to the "E" train query relating to the destination indications on the swing door motors, I have been able to devote some time to researching this subject. At present not all the information has come to light but I am sure the information presented here should be sufficient to answer the letter.

In 1934, the "AM" class swing door motors used on "E" trains were fitted with the 1933 "Sliding Door" (Tait) destination rolls. These rolls had the following stations listed:

SPECIAL	ESSENDON
ASPENDALE	BROADMEADOWS
DANDENONG	HURSTBRIDGE
SPRINGVALE	ELTHAM
NORTH WILLIAMSTON	ALPHINGTON
WILLIAMSTOWN	HEIDELBERG
WILLIAMSTOWN PIER	NORTH CARLTON
OAKLEIGH	PRINCESS BRIDGE
FRANKSTON	RESEVOIR
CARRUM	ROYAL PARK
MORDIALLOC	THOMASTOWN
MOORABBIN	CROYDON
GLENHUNTLY	BLACKBURN
FLINDERS STREET	RINGWOOD
SUNSHINE	FERN TREE GULLY
ST ALBANS	LILYDALE
DARLING	ST KILDA
KEW	FLINDERS STREET
GLEN WAVERLEY	PORT MELBOURNE
EAST MALVERN	CAMBERWELL
COBURG	BOX HILL
FAWKNER	SPENCER STREET
NEWPORT WORKSHOP	PORT MELB STATION PR
SANDRINGHAM	RACE SPECIAL
BRIGHTON BEACH	ASHBURTON
ELSTERNWICK	

In addition to the preceding destinations, the following destinations were added for use on swing door "AM" and "ABM" swing door motors. These destinations precede "SPECIAL" on the rolls:

WARBURTON
HEALESVILLE

WAR—TN — HVILLE
MORNTON — ST PT
MORNTON — RED HILL

As far as I can ascertain, the destinations MORNTON — ST PT (MORNINGTON — STONY POINT)

MORNTON — RED HILL (MORNINGTON — RED HILL) had been removed by the 1950's and replaced by two destinations showing:
STONY POINT.
CRIB POINT

The exact wording/lettering on the rolls as presented here may be slightly different, however the main concern is the destinations presented.

In response to the letter, I have instituted further research into the "E" train operations. As well I have been involved in suburban train and carriage research and would be pleased to hear from other people involved in this activity. Contact may be made at the following address: — 8 Muir Street, Richmond, Vic 3121.

P. Vincent,
Richmond, Vic.

Sir,

May I express my appreciation for the comments in "Mail Bag", June 1982 issue of AMRM made by W. Hoskins along with the item in "AMRM News" in the same issue, both dealing with "Brass Locos for the Minority".

The opportunity to participate in a survey on this subject is also welcome. I do hope it will draw appropriate response.

It seems to me that, usually, when narrow gauge modelling is mentioned, scenes from the past predominate. However, in Australia's contemporary railway scene, the "Colonial Gauge; (3'6") represents quite a sizeable slice of the total track mileage, modern signalling and control systems, and up to date locomotives and rolling stock. Therefore, we are in the fortunate position of being able to choose and nominate our favourites from both the present and the equally fascinating past. In line with this type of thinking, I have wondered at the possibility/feasibility of the various producers and importers of the NSW 48 class loco releasing a "Colonial Gauge" version. I, for one, could accept such a loco in Q.R. livery with Q.R. appendages on it.

No doubt most of us would love to see our homestate favourites, in model form, readily available. Such an array could not possibly hit the market all at once. It follows, then, that someone will be delighted to see their pet loco appear first. The rest of us may have to compromise for a start until models for this sector of our hobby become more prevalent.

Personally, I would love to see an array of C.19, B.18¼, B.B.18¼, C.17, D.17, etc. etc. available; but who in Tasmania, South Australia, Western Australia, or Northern Territory, would share my excitement? Certainly not the majority. A locomotive familiar to the greatest number is therefore more appropriate as a starting point.

I once read that the Q.R. C17/C.R. Nm class 4-8-0 was the most numerous of any colonial gauge locomotive in Australia, but even here there is the problem that modellers in Tassy, WA, or the Territory, may never have seen them in their various forms and may not be attracted to them.

W. Hoskins mentioned the S.A.R. "Y" class 2-6-0 as operating also on C.R., W.A.G.R., & T.G.R. Rails. It may be of some interest to know that five of these quaint little ladies also operated in North Queensland on the Atherton Tableland under the ownership of the Chillagoe Mining Company. Two of them eventually passed into Q.G.R. ownership, were classified as AY and BY, and worked on the Cairns to Tableland railway. This could possibly justify such a loco on a Q.R. layout, althouth, admittedly most of us up here would never have seen them. But... could this be a logical starting point?

Whatever the eventual choice may be, and national and international economics allowing, I hope there will be a starting point.

My thanks for an interesting and helpful magazine.

I enclose my contribution to your "Narrow Gauge Locomotive Survey".

Noel H. Ottaway,
Kuraby, Qld. 4112.

Sir,

Mr Dunn's letter on page 37 of the October '82 AMRM would have been funny if it wasn't so sad. Why would anyone close themselves off to a source of information about the hobby just over a spelling error?

Further to the August '82 edition AMRM News item of publications featuring prototype operation, the Light Railway Research Society of Australia publishes the 'Light Railway News', either bi-monthly or quarterly. This contains information on Australian and South Pacific region light railways, narrow gauge and narrow gauge museum activities. This publication is in addition to the research publication, 'Light Railways'.

Details of membership from the LRRS of A, PO Box 21, Surry Hills 3127.

Keep up the good work!

Stephen Cox
Canberra City 2601

Sir,

Allan Watson, in his letter which appeared in the March/April 1981 issue of this magazine, raised the matter of the post-revenue service identity of "A" truck No. 11889.

I can confirm that A.11889 became L.1375 on the departmental vehicle register. It was finally condemned during the period 18.7.82 - 14.8.82.

P. Rogers
Flynn 2600

Sir,

I refer to the letter by J. Oxer (12-year-old) in the October 1982 issue of AMRM who had a problem with keeping rails free of oxide.

I am only a newcomer to the 'modelling business' but had a very similar frustrating problem.

Whilst a Peco track cleaning rubber helped with the problem, I found that the best solution to the problem was to get a small piece of cotton wool on the end of a pair of tweezers, put two drops of sewing machine oil on the cotton wool and wipe the track where the greatest problem exists.

The wheels of the rolling stock then carry this small smear of oil completely around several meters of track. It solved my problem, maybe it will save others.

V. A. Hebbard
Ipswich 4305

Sir,

On the subject of point-to-point operation and running commentaires on model railway layouts, I should like to elaborate on the recent letter of R. Grime and G. Lewis.

I am very much in agreement with the points raised in this letter but wish to emphasise that if a commentary is to be used, it has to be done well. The running commentary was rightly condemned in this magazine some years ago when an example was given of chit chat and friction between operators coming over on the public address system being used.

However, the system master-minded by Bob Grime, of complimenting the commentary with a synchronised train sound system taken from actual recordings of the prototype being portrayed, has certainly produced the formula for bringing point-to-point layouts to life, as far as the general public is concerned.

At this year's North Shore Railway Modellers' Association exhibition at French's Forest, the O gauge point-to-point layout of the above club, which featured this sound system, had the public clamouring three to four deep most of the time, and very much up-staged the 'Lulworth Cove' point-to-point layout which exhibited much more action as far as train intensity was concerned.

Not to be outdone, Lulworth Cove was exhibited at the Sydney Showground this October with a hurriedly-put-together similar sound system, but went one step further by complimenting this with a Pendon Museum type commentary.

In this system, individual features of the layout, its supposed location, formation of trains and locomotive descriptions were made and where necessary trains held up to complete the descriptions. Although far from perfect, the success of the system was beyond doubt. Throughout most of the exhibition, the crowd was at least two deep all round the layout and Lulworth Cove was voted the most popular by the public by something like a 3 to 1 majority. Let me repeat, Lulworth Cove is a purely point-to-point layout.

I think we can now say beyond doubt that in Sydney at least, the public have come to accept layouts which feature prototypical operation, provided that it is well presented. Whether or not they are point-to-point layouts is irrelevent.

I should like to offer a challenge, through the medium of this magazine, to all Sydney area modellers of the NSW prototype, that unless they start to produce some 'operational' layouts incorporating some sort of sound system, and I don't mean simulated steam train sounds which are diabolical in comparison with the real thing, they will get left behind as far as competitions are concerned at exhibitions. Up to now it has been only British prototype layouts which have this feature or which are contemplating introducing it.

Although the full commentary-come-train-sound system could be applied to the so called 'standard exhibition layout' featuring a through station with fiddle yards behind, it would be very difficult to enforce the discipline necessary for its success when operators are able to lapse into merely running the same train round and round.

In conclusion I should like to declare that to operate a layout accompanied by true, synchronous train sounds, in front of a spellbound audience, gives one a feeling of euphoria and I recommend it to you all. However, you must start with a layout on which the trains can be stopped and startd with super reliability and this in itself is not easy.

Peter Betts
Frenchs Forest 2086

Sir,

We are calling modellers interested in modelling the Wolgan Valley Railway (or Newnes Railway) to contact us for the forming of an "Association" or "Club", to help promote in model form and visit the now abandoned line.

To date, we have had a small group of both modellers and historically minded people along to two meetings, one was a film night showing amongst other movies, one of working Shay Locomotives.

Interested people please contact either:—
Wayne Rylance on 55 5394
Raymond Whitfield 476 1011.

Raymond Whitfield
Hornsby 2077

Continued on page 54

REVIEWS

NSWR C38 Class (unstreamlined) Steam Locomotive in N Scale by Indi Enterprises (Sentinel) P.O. Box 415 Albury. Price: $99.50

More models of this Prototype have been produced than any other Australian Prototype. The model under review is the second N Gauge C38 produced by Sentinel and, according to the manufacturer, incorporates a number of improvements including a new type of motor and transmission.

The kit came in a small box with the pieces for the various sub-assemblies wrapped separately. The tender frame and bogies and the parts for the Loco were cast in white metal. The tender body was plastic and came in seven pieces. There was only a small amount of flash on the metal parts and none on the plastic pieces. The Loco frame, motor, gear train, wheels, valve gear and front bogies came pre-assembled. The valve gear is not a complete representation of the 38's Walschaert's motion.

There was one instruction sheet which included an exploded diagram and a painting guide. There was also a sheet of ammendments and an amended diagram for the Mk II kit.

The dimensions of the completed model are compared with the Prototype below.

	Prototype	Model
Length Loco & Tender	76'4⅝"	79'6" (excl. Coupler)
Width	10'	10'
Height	15'	17'
Weight	195 tons	7 ozs
Front Bogie Dia.	3'	2'
Drivers Dia.	5'9"	5'6"
Pony Truck Dia.	3'6"	3'6"
Tender Wheel Dia.	3'1"	3'6"

As you can see, the dimensions are within reasonable limits.

When I completed the kit I ended up with a good Loco. It looked like its prototype. The amount of detail on the model was reasonable although some items were missing. Ladders are provided for the front apron but I found them difficult to install and finally left them off.

My Loco ran smoothly and pulled a decent load. I tested it, without running it in, on a 12" radius curve situated on a 1 in 55 grade. On this grade it started a passenger train made up of seven U.S. heavyweights with ease. On the same grade it walked away with 12 standard 40' wagons and once past the curve it could handle 16 wagons. Whatever the load it started smoothly and ran well at low speeds.

The kit could have been easy to put together but the instructions made it quite difficult. They are poorly set out and when combined with a poorly set out sheet of amendments the result can be a disaster and on several occasions it almost was. Several times I almost missed important steps because of the need to check two sets of instructions. The manufacturer should re-write the instructions, into a single set preferably in a point-form format, as soon as possible.

The other major problem that arose also included the instructions. These directed me to drill a number of important holes with a No. 50 drill and then tap them with a 10BA tap. When I did this on the first hole I found that the screws supplied with the kit fell right through. All the screws that came with my kit were 8BA and I suggest you check the screws in the kit before even reaching for the drill.

I was not impressed with the coal load supplied for the tender either. I left mine out and it its place I will eventually put a load of real coal.

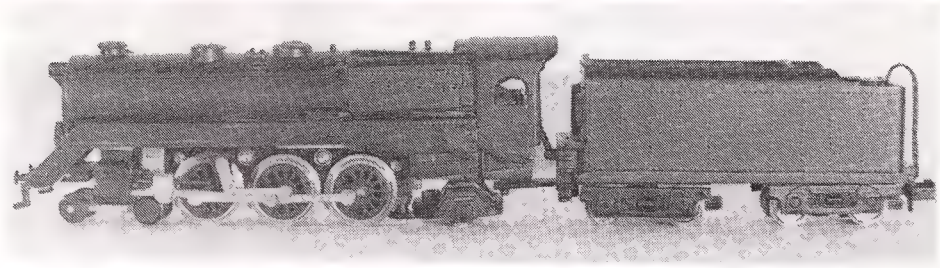
Apart from those things I enjoyed putting the kit together and I'm very pleased with the result. I feel that Sentinel should be applauded for their effort.

Stuart Livesey

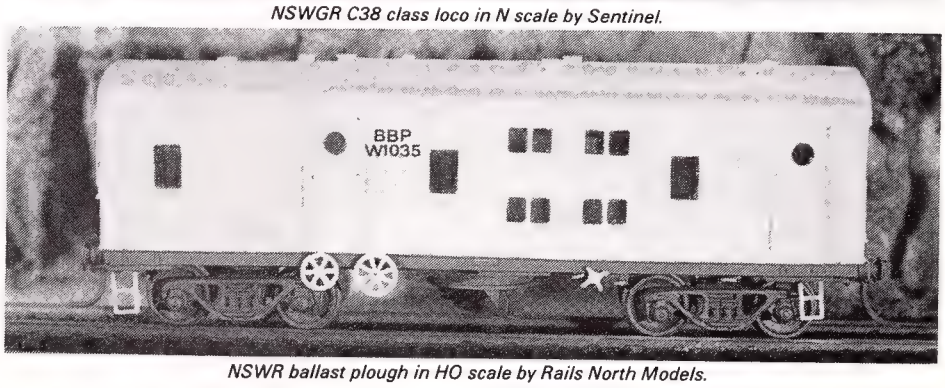
NSW 'BBP' plough van kit in Ho scale by Rails North Models. Available from Casula Hobbies, Phoenix Plaza, Macquarie St, Liverpool 2070. Price: $17.50.

The BBP is a van which is used to spread (plough) the ballast on the road (rail) bed. Generally, in operation, it is coupled to a rake of ballast wagons, a standard brake van being on the other end. The train engine can be attached to either end of the train during transit to the site where the ballast is to be worked, but the engine always pulls the train with the plough at the end when working the ballast. The vans are a 'Departmental' vehicle and are painted white. When not in use they generally sit on a vacant track in a major yard.

The kit was modelled off BBP W1042, which



NSWGR C38 class loco in N scale by Sentinel.



NSWR ballast plough in HO scale by Rails North Models.

appears to be one of the vans built early in the production run.

The kit is comprised of a number of grey epoxy castings, wire, timber and aluminium sheet for the roof and two pages of instructions. The instructions include a step by step assembly method and illustrations of various items and assembly methods.

All major items are epoxy castings, which are straight, square and free of casting defects. The sides include door and window detail, guards prism look-out, side sill detail and some steps. The curved edge of the roof is attached to the side. Glass is cast into the sides for the windows, and is covered by a thin layer of epoxy. The ends include cast-on steps and coupler pin lifting bar supports. A feature of both sides and end panels is the positioning of the handrail holes.

The floor, an epoxy casting, includes an undetailed centre sill, brake/air cylinder, brake and air release brackets and the positions for the ploughing wheels. In the centre of the floor is the bolster point for the plough blade.

The plough blade is provided as a separate casting, the yard brake handles (4 off) are on a section of epoxy and the plough blade operating wheels are provided as well as the roof ventilators. There is good evidence of flash on these latter detailing items, but this is considered as an asset during transportation for the flash gives the frail components some support.

The instructions detail the assembly process, which is relatively straightforward for what is a complex model. the roof is formed out of a bed of balsa covered with the aluminium sheet. Any dents or grooves should be filled and sanded to the curvature of the roof. Adding detail was the hardest part for, as good as the instructions are, the detail position is vague. Here a photo or two of the prototype would have been handy (especially as it appears W1042 is an unusual plough van).

To the model Kadee 5 couplers were fitted (correct height) and Protype modern roller bearing bogies, painted white (cream) and decaled with bits and pieces from the MnJ range and Letraset. Total weight of the van is 85 gramms (122mm long) and the bogie pivot mounts provide for good tracking.

A fine model can be built from the kit, as long as time and the necessary care is given to the project.

Bob Gallagher and Graham Ball.

Broad Gauge Models Kit No. PW2. VR GY brake gear and shunters steps. Sample obtained from the manufacturer, retail price $6.60.

This kit consists of a sheet of etched 10thou brass and a quantity of copper wire. It contains sufficient material to detail five GY wagons with handbrake, automatic brake and shunters steps. While the kit is specifically designed to complement the BGM GY-kit, it could easily be adapted to any other GY wagon, with little or no modifications. It is also suitable for HY, RY and some GZ class wagons. Parts are only supplied for the brake shoes and hangers. If the modeller requires full brake rigging he will need to fabricate it from wire following photos and on-site inspection of a prototype wagon.

All parts are cleanly etched and are easily parted from the fret. Following the sequence suggested in the instructions and using a Superglue the details go together very smoothly. Some parts may be soldered if preferred. The major difficulty for many would probably be the actual handling of the small and fragile parts; tweezers are essential, as is a No. 76 drill.

The one small omission in the instructions is that they don't clarify to the modeller that the trainbrake works on all four wheels, whereas the handbrake is only on two wheels. Most VR modellers would probably be aware of this anyway.

Summing up, this is a well designed product, and an excellent way of dressing up your GY wagons with a minimum of effort.

Peter Eisenhut

SAR Piping Shrike in HO scale by Broad Gauge Bodies, PO Box 6, Marden 5070. Price $1.70.

The piping shrike is the basis for the SAR emblem, and this pack of six emblems are full colour photographic reproductions. The 4.4 mm diameter circle clearly illustrated the emblem that was used on SAR, Broad, Standard and Narrow guage locomotives. To use the emblem one simply cuts it out and glues it in the required position.

A further piece of historic detail for the old South Australian Railway system.

Bob Gallagher

How to Build Model Railroad Scenery, by Dave Frary. Published by Kalmbach Books. Price: $11.25.

A book reviewer normally attempts to read a book before putting pen to paper. I have not yet managed to read all of this book, yet there are sections I have read four or five times, it is that sort of book. Dave Frary describes it as a 'cookbook of workable, repeatable scenery recipes'. In it he describes methods that he has found successful.

The author's ability to build realistic scenery cannot be challenged. The layout 'Carrabasset and Dead River Railway' as featured in the American model press was built by Dave and Bob Hayden. Some of the methods described in the book were used on this fine layout.

Chapters included are:— (a) New Materials and Techniques; (b) Designing scenery with plans and models; (c) Building scenic forms and shells; (d) Basic colours and textures; (e) Modelling rock and rubble; (f) Scenic finishing; (g) Trees, stumps, weeds and vines; (h) Modelling water; (i) Backdrops and background scenery; (j) Diorama techniques for foreground scenery; (k) Special situations and special effects.

The various subjects are well covered by the test, tables (recipes) and many photographs (67 colour and 187 B & W photographs). The topics covered are extensive but the techniques described are by no means the only successful ones. The book was

written in the USA and describes materials available there, some of which are not available in Australia, although local substitutes are sure to be found.

The book is not an A to Z book but it covers information that is useful to the enthusiastic novice or the experienced scenery engineer. It does not replace 'Scenery for Model Railroaders'; but is more a companion volume.

If you are interested in scenery techniques you will find the addition of this book to your library an asset. It will give many hours of worthwhile reading and provide for many hours of experimenting with scenery techniques.

Trevor Moore

V.R. 'VLX' louvre van kit in 'n' scale by Fybren Models, PO Box 88, Ivanhoe, Vic. Price: $6.95.

The VLX is a modern, steel sided, high roof louvre van, that has been the general goods carrier for VicRail for nearly 20 years. Being a bogie exchange van it can be found on almost any express freight system. The vans were built over a period of years and various variations do occur within the class.

This model represents the vans built in 1966 being Nos. 189-205, 318-335 and 372-385, the style having four louvres in the side doors and one louvre in the end roof panel.

The model is supplied in a poly pack with a card top, the latter doubling as an assembly sheet. Sides, ends, roof, and floor are all supplied on a common sprue of brown styrene.

All parts were cleanly formed and only required separation from the sprue with a sharp knife, and the burr filed away. All components are square, flat and free of flash and moulding faults.

Details are sharp, square and well formed. All features of a VLX are moulded onto the sides and end, including the hand brake. A real feature is the moulded-on brake and air cylinders on the structurally detailed underframe. A feature not found on HO scale kits.

Following the illustrated detailed assembly instructions and aided by assembly ridges on the rear of the components the model was very easy to assemble and only took 10 minutes to finish assembly. The profile of the ends had to be modified a little to allow the shaped roof to fit in place.

Included in the kit is a set of arch bar style bogies and coupler (Rapido style), bogie pins and a set of decals. The bogies are easily applied as per instruction, the 1.4mm drill required being adequately substituted with a No. drill.

Painting instructions are supplied in the kit provide the large VR logo, code board, bogie exchange 'X' and a row of numbers for numbering the wagon. All decalling is in white. Although the decal film is thin the logo is not too difficult to apply in one piece. The numbers are small and fiddly but help with the appearance of the model.

A fine kit.

Bob Gallagher.

Gears for the Lima "G" type motor, in HO scale. Available from the manufacturer, Concord Hobbies, 43 Currawang Street, Concord West 2138. Price: $4.95

In the October issue we reviewed the geartrain designed specifically for the ealier Lima mechanised 6 wheel bogies (specifically the 44/930 classes). We now have to hand a geartrain for the new G type motor, in this case the 4 wheel version.

The gear set is supplied in a poly bag, and is accompanied by a brief instruction sheet. Installation is relatively straightforward, and largely identical to that of the other geartrain.

In all respects, the comments made in the October review apply equally so to this unit. The end results are the same. One point though: the 4 wheel unit is not interchangeable with the 6 wheel unit because spacings are different.

A good product and well worth installing if you want more responsive running.

Allan Brown

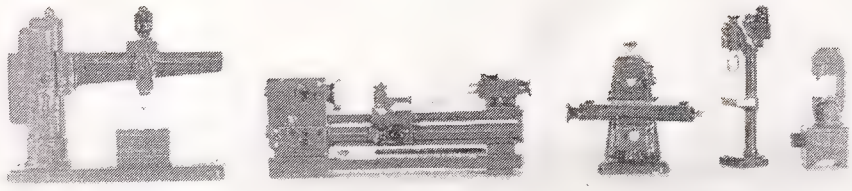
Machinery in HO scale by F & G Models, PO Box 149, Kilsyth 3137. Price in text.

These metal castings are painted representations of engineering machinery. Painted in 'machinery' green they are detailed with black, silver, red and green in the correct places. The castings are well detailed with stop/start buttons, adjustment handles, levers, chucks, cutting tools, and bed ribbing.

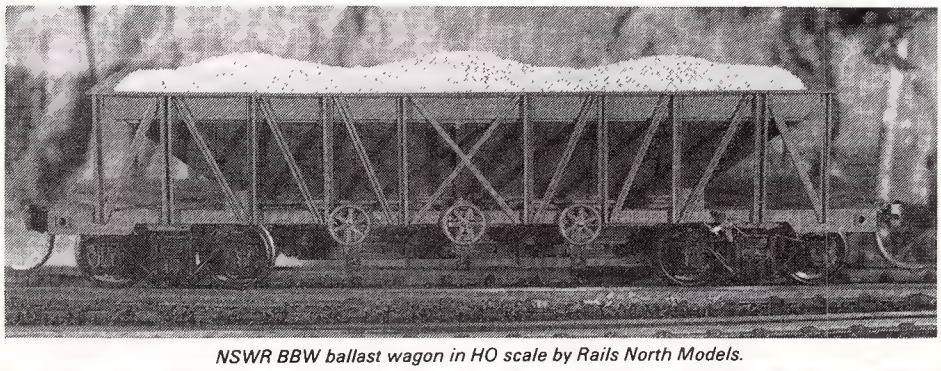
The range includes (with the price in brackets) No. G22 bandsaw ($1.75) standing 20 mm high; No. G21 pedestal drill ($1.75) standing 27 mm high; No. G19 milling machine ($2.60) standing 22 mm high and 22 mm wide and has a seperate bed; No. 18 lathe ($2.60) standing 17 mm high and is 43 mm long; and No. G20 radial arm drill ($2.60) standing 30 mm high and is 37 mm long.

The machinery would look fine detailing the interior of a factory or look in place adorning a dock awaiting crating prior to being transhipped by rail.

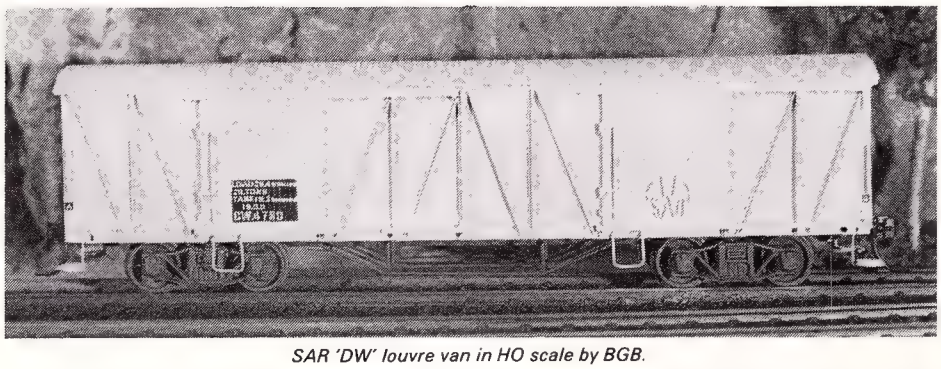
Bob Gallagher



Machinery in HO scale by F & G Models. Included is, Radial arm drill, lathe, mill, pedestal drill and band saw.



NSWR BBW ballast wagon in HO scale by Rails North Models.



SAR 'DW' louvre van in HO scale by BGB.

NSWR 'BBW' ballast wagon kit in HO scale by Rails North Models. Available from Casula Hobbies, Phoenix Plaza, Macquarie St, Liverpool 2070. Price: $13.95.

The 'BBW' is a bogie ballast wagon that is listed as a 'Departmental' vehicle, although coded for revenue earning. It is used to transport ballast from the quarries to the track. The wagons are used in block trains along with a plough and are also used in mixed consist trains when it is necessary to freight the ballast a distance from the quarry. The wagons are equipped so that it is possible to gradually add the specified amount of ballast to the track bed. Initially they were painted 'goods wagon grey' but have also been seen in the black, blue and red livery.

The kit is supplied in a card topped poly bag along with two pages of instruction sheets, one of which is diagrams showing how and where the parts fit. Parts supplied include a one piece hopper section, a one piece underfloor section including side sills, two side bracing sections, brake and air tanks, hopper levers, brake handles, wire and coupling screws.

Flash is minimal on major parts but on the smaller items the flash was rather heavy. This was an advantage with the side braces for it was possible to leave the flash on the braces until they had been fitted, when the flash was removed. Using this process the chances of breakages were minimised. Extra care is required when removing flash from hopper operating brackets, operating wheels and handbrake.

Assembly was straightforward, with special care being taken with the many fine castings. In some instances the side brackets did not always assemble squarely, but adjustments can be made during assembly. Super glue was used throughout assembly. Roundhouse arch bar bogies were added and Kadee No. 5 couplers used.

The weight of the one piece hopper casting gives the completed model a good operating weight, although it forces the modeller to always have the hopper full. Completed the model is a fine representation of the unusual BBW hopper wagon. Detail quality is up to the high standard we can expect from Rails North.

Coupled with four or five other BBW's and a ballast plough a good and unusual train would result.

Es Davies

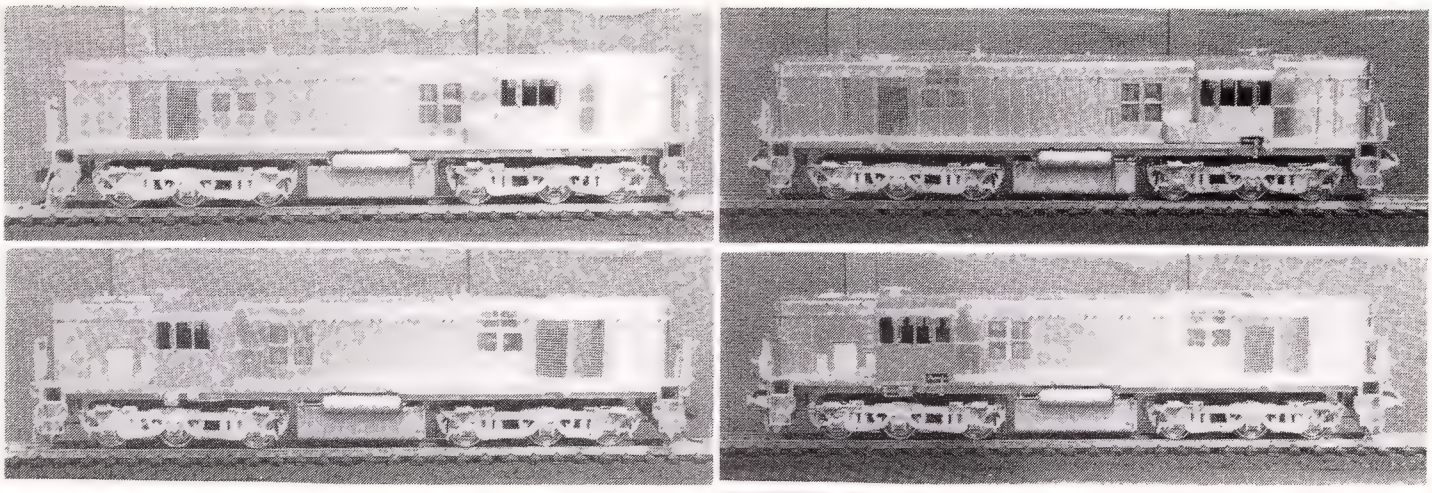
SAR 'DW' louvre van kit in HO scale by Broad Gauge Bodies, PO Box 6, Marden 5070. Price: $8.10.

The DW is a (timber) louvre van which was introduced to the SAR in 1945. There were 29 vans built and all but 3 remain in service. The vans were used for carrying perishable goods and used on both goods and passenger services. Vans used on passenger trains were painted in maroon and silver and fitted with a sheet roof and raised roof vents, and coded 'DWR'. They were fitted with Bettendorf bogies.

The DW had a corrugated iron roof and fitted with Arch Bar bogies and have been painted in the various SAR/ANR liveries. Some have been given the latest green and gold livery, replacing the SAR grey. The class have been recoded to ALAA and ALAY.

The kit includes polyester castings for floor, ends, and sides. Also supplied is the usual write for handrails, curved aluminium stock and corrugated card for the roof and a set of decals to code the van for SAR DW class, with a choice of 3 numbers. Included are a number of rail spiles to be used as truss rod queen posts.

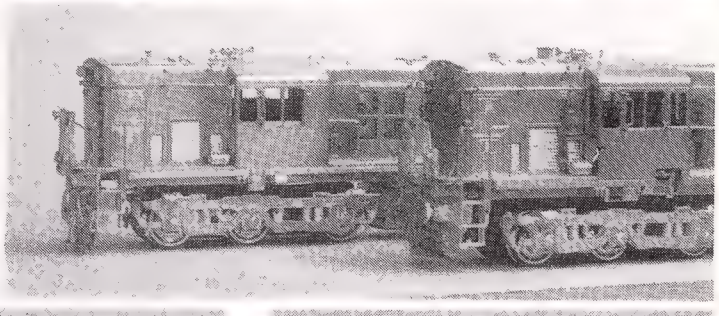
The accompanying instruction sheet provide detailed information on the prototype, kit assembly as well as assembly illustrations and photographs of the DW in SAR livery. Unfortunately there is no photo-



The above two photographs illustrate the SAR 600 class loco as built for Mansfield Hobbies.

The above right two photographs illustrate the NSW SRA 45 class loco as built for Mansfield Hobbies.

The photo on the right illustrates the basic differences in the Mansfield 45/600 class loco. Note the variation in the windows and the cab side. The 45 class is in the foreground.



graphic reference to the ANR livery.

Detail on the components is very sharp, square and the castings were free of defects. The shape and detail of the louvres have been nicely reproduced. The sides are premarked for the position of grab rails and the underfloor section, moulded with centre sill and bolsters, is premarked for position of truss rod droppers (queen posts).

All components were straight, thus aiding construction/assembly, which like most BGB kits was very straightforward. The floor had to be reduced in width (evenly each side of the centre sill). All truss rod and handrail markings were squarely positioned. The Kadee No. 5 couplers fitted at correct height when packed down 0.025". Roundhouse Arch Bar bogies were fitted.

Completed the van weighed 70 grammes (143 mm long).

Overall quality is very good and the characteristic timber style has been captured. This van is given further character by the provision of the truss rods, and for the real period modeller the decals include the weight lettering in both imperial and metric measurements.

A very fine kit of a van that was restricted to the broad gauge system.

Graham Ball.

NSW 45 class diesel electric locomotive, in HO scale from Samhongsa of Korea. Imported by Mansfield Hobbies, 100 Pacific Highway, Waitara 2077. Price: $260.00.

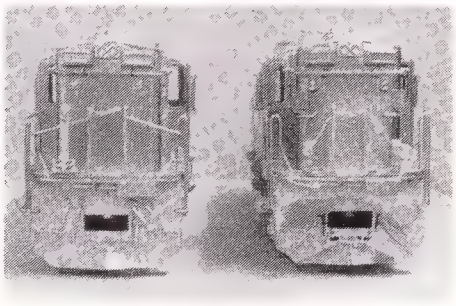
The twenty strong members of the 45 class were introduced progressively from June, 1962 into the NSW system. They are in many ways a hood unit of the earlier 44 class of the same system. At least one of their class has been painted in each of the various paint schemes common to NSW as of late. The locos are currently based at Enfield and Broadmeadow.

The model drives from a centrally located 30 mm 'flat can'' type motor, through universal shafts to a series of reduction gears mounted vertically on each bogie. All six axles of the bogies are driven. It is not a fast runner, but then who wants it to be!

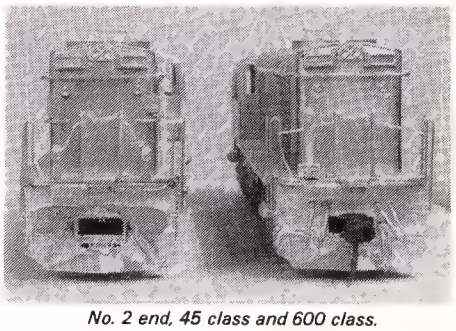
Access to the motor is a lot simpler than we have been accustomed to. One simply has to remove four screws and the chassis drops out. The old days of removing the handrails first have long since gone.

The detail on this model is excellent. The photo etched body panels are highlighted by chemically etched grillwork of stainless steel, providing a see through feature. The main air intake fan in the roof of the long hood is prototypically represented and actually revolves if blown on. We can only but wonder who will be the first to motorise it. Lifting rings are located on the roof panels, and rear vision mirrors on the cab sides. Grab rails around the body are held on by correct contour stand-off posts and do not project excessively.

The bogie side frames are quality lost wax castings



No. 1 end, 600 class and 45 class.



No. 2 end, 45 class and 600 class.

and the correctly split drop equalising beams are well featured. Brake cylinders, brake shoes and all spring detail is included. The bogie gear boxes are pre-blackened.

The end pilots are also lost wax castings and are fitted with sprung buffing plates, air hoses and coupler release rods. The multiple unit posts are well detailed, and the end hand rails are uniform and symmetrical in their application. The thing that makes this model so appealing is that everything on it is straight and square, with no unsightly solder marks. The model has been buffed and given a coat of clear lacquer for protection.

To clear the buffing plate I found it necessary to fit Kadee No. 16 couplers (with the No. 8 box to prevent coupler sag). As a result the couplers have a tendency to overhang on curves (in my case 30") thus pulling four-wheelers off the track. This only appeared on commercial S trucks: the K trucks seemed OK. A little weight in the S trucks corrected the problem.

The model has the same pulling capabilities as the earlier 442 class from this manufacturer, a drawbar pull of 120 grams. It double heads equally well with the 442 as well as with other 45 class models. The unit under review pulled in excess of 13 standard Lima passenger cars (all up weight of 1590 grams) up a 1 in 40 grade, and walked it in.

The model comes in a green foam lined box along with a pack of assorted screws and springs, a coloured photograph of one of the prototype class, statistical data, a plan plus a sheet of decals. There were 325 models built.

One minor point however relates to the speed cable bearing on the front bogie. All photographs show it as being on the first axle: the model has it on the third. Also, the bearing covers appear to be incorrect. However these are minor matters and must in all fairness be construed as nit picking.

In summary the model looks good, performs well and, if not already sold out, is one that I would recommend to the NSW prototype modeller seeking value and reliability. Mansfield's, as is customary, carries a good range of spares, should they be required.

Allan Brown

ANR/SAR 600 class diesel electric locomotive in HO scale by Samhongsa of Korea. Available from Mansfield Hobbies, 100 Pacific Highway, Waitara 2077. Price: $260.00.

The 600 class locomotives entered service in South Australia in 1965. In all there were 7 units built (numbered 600-606), the last unit (606) entering service in 1970. Bascially the 600 resembles the 45 class (both classes being credited with similar mechanical and dimensional details) although there were obvious differences in exterior detail.

Initially the locos were painted in the SAR maroon and silver livery but they were, at a later date, given the mustard and red livery. The class was stationed at Peterborough and limited to standard gauge running between Broken Hill and Port Pirie. In 1982 six of the class returned to new South Wales where they are currently used to haul limestone trains between Maraulan and Port Kembla.

Essentially this is a model of a 45 class that was modified (to represent the 600) during manufacture. The 55 models were built when Mansfield Hobbies responded to requests by some modellers.

Detail differences (to the 45 class) includes the three pane cab windows, SAR style 'multiple unit' sockets and destination panel, omission of staff exchange pockets, removal of some roof piping and removal of buffing plate (both ends). The model does not have the recently added large vents in the short nose.

The model is similar in construction and standard to the 45 class reviewed this issue. Workmanship would be rated as top class. The mechanism of train gears moves the model from a start at 1 volt and at top speed only draws 400 milliamps. Movement through the speed can only be described as smooth. Its drawbar pull of 120 grams allows it to handle almost any modelling requirement.

The coupler pocket neatly accepts a No. 5 Kadee at the correct height. The bogies, pivoting between the centre and rear axle, allow the model to negotiate almost any curve, although there is some restriction on coupling the model to a four wheeler and then trying to negotiate a curve under 24".

The model is accompanied by a set of spare parts and a photograph of 606 in maroon and silver livery. Mansfield Hobbies introduced the (good) idea of including colour pics with the model, but for assistance in painting the model the photo accompaning the 600 would rate very low. The very slight ¾ view just does not show enough of the loco to be helpful.

Despite the latter comment this is another excellent model from the Mansfield Hobbies stable.

Bob Gallagher

VR 'Z' van in HO scale, by The Model Company of New Zealand. Available from McBees Hobby Centre, PO Box 144, Coburg 3058. Price: $69.95.

The Z van is one item that would identify a layout as V.R. The class of four and six wheel guards vans has been in service (initially as D vans) since the last century and they are still in service today. In March 1982 there were 135 fixed wheel Z vans in service, including two on standard gauge.

The model of the Z van was modelled off drawings dated 4/1889. The model is a six wheel version and is supplied in an attractive card box, lined with white sponge. Included with the model is a set of decals, a marker lamp, tail disc and jewels, along with an information sheet.

The ready to run, painted model has been preformed from brass etchings and castings. Etching includes the vehicle boards, dog box louvres, sliding windows and rivets. Detail includes, handrails, door handles, brake shoes and rigging, end panel steps, wires behind goods doors, smoke vent, marker lamp brackets and complete body length steps.

The quality of the detail and the workmanship in assembly is first class. All components are square, dimensions accurate and sizing near scale. The wheels in the cast axle boxes are the new style North Yard 10.5mm spoke wheel. The side frames are held on with (unpainted) brass screws, the centre wheel being held in place with screws. The wheels near the ends are pinpointed and spin in the journals; they spin very freely. The centre wheel spins on an inside journal. Rotation is not very free, and overall tracking is not aided by one wheel being assembled with a wobble.

The model is painted Floquil Zinc Chromate for the body, brown roof and black undergear. The paintwork appears to be a first rate job, although there is some evidence that the paint is rubbing off the brake rods, suggesting that the preparation for the painting could have been better.

The parts accompanying the model are designed to enhance the model, and with a little attention, this will be the result. Kadee No. 5 couplers slip into place (secured by the screws provided) and are the correct height. The decal sheet (produced by BGB) provides decals for the 'Z', 'ZL' and 'ZP' codes along with sufficient numbers to allow the modeller individuality in numbering. Also included, in white, is all the necessary lettering that adorns the van. All directions as to where the individual decals should go are on the instruction sheet, although the inclusion of a photo would have helped.

In all this is a superb model, and it is not made in Japan or Korea. For years we have been led to believe that all of our brass models had to come from the Eastern countries. Well, these vans have come from New Zealand, and that is east of Australia!

Bob Gallagher

SAR 'CALTEX' advertising van kit in HO scale by Broad Gauge Bodies, PO Box 6, Marden 5070. Price: $9.90.

In all ten 'M' vans were used to carry the Caltex slogan in the late 1940's and early 1950's. The vans had red sides, black undergear, grey roof and the main lettering was grey outlined in black. The red Caltex star, in a white circle adorned the door and other white lettering made up the detail on the side of the van.

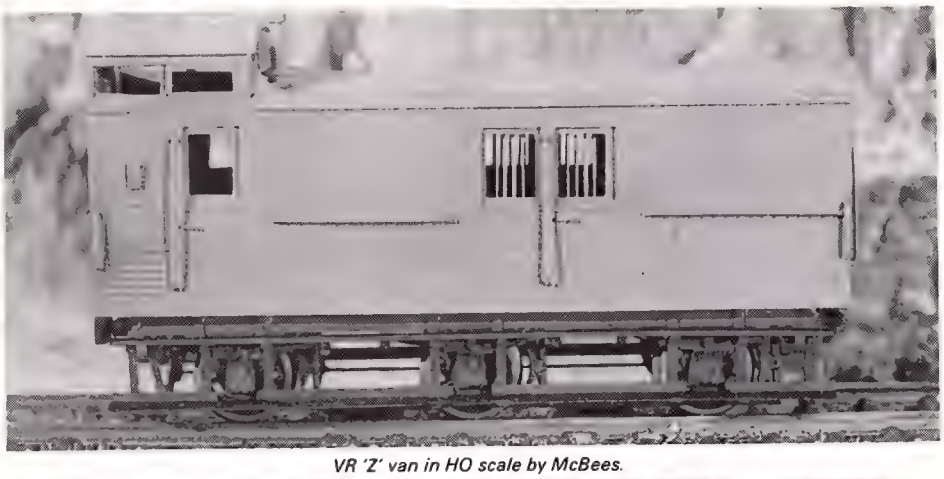
The kit is a basic BGB SAR 'M' van kit which has been covered in detail a few times in AMRM. This kit includes the revised instruction sheet, along with a special sheet on the 'Caltex' van.

This sheet includes prototype detail, a photo of the van with logo attached, recommended colours to use and instructions to apply the decals. The decals, provided in a poly bag, include all lettering shown in the photo. Separate numerals are provided to alter the fixed road number 7447. The list of correct road numbers is provided.

Kit assembly and decal preparation is the same as for others in this range. Some delay in overall assembly time is caused by the necessary use of gloss paint on the sides. There was a section of decal work close to the door that was not mentioned in the instructions, but added to the final model.

Completed this is an outstanding model. Its red livery, adorned with the high class BGB decal-work makes this model really stand out. The standard of the decals can only be described as high class. A really colourful model.

Graham Ball.



VR 'Z' van in HO scale by McBees.

'CALTEX' advertising (M) van in HO scale by Broad Gauge Bodies.

Swedish Railways freight wagon in HO scale by Lima.

Swedish Railways freight wagon in HO scale by Lima — Sample supplied by Southern Models, Adelaide.

This special purpose wagon is one of a number of new items of freight rolling stock appearing in the Lima catalogue for 1982/83. It is referred to as a wagon for tansporting turnings and is of rather unusual design. The wagon has no roof covering, just three curved roof struts across the vehicle and one longitudinal one. The enclosed sides open out as four doors along the bottom half of the vehicle as if designed for side dump unloading. The doors on the model can be swung out and up to 90°. The floor is a separate moulding with wooden planking, etc. represented thereon and the buffers are attached to the ends of the floor moulding.

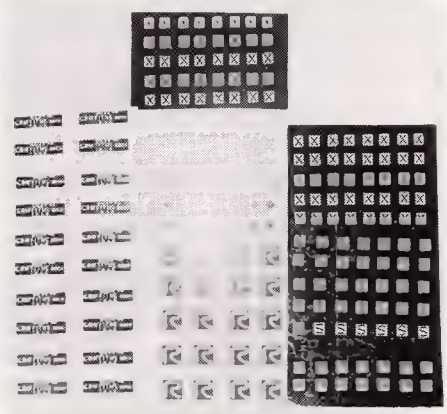
This four wheel wagon is a typical European long wheelbase vehicle (24ft 6in in HO scale) and is painted in an all-over brown colour scheme common to much European freight rolling stock. Swedish Railway markings, etc. are in white. The model has some fine pipework and rivet detail which we expect to see from Lima these days.

This is a wagon which would add some variation to a European freight train and is worthy of consideration if looking for something different.

Graham Ahern

Griffith Bros, Tea sign decals in HO scale by Broad Gauge Bodies, PO Box 6, Marden 5070. Price: $1.70.

The enamelled signs of Griffith Bros. Teas were positioned alongside the line, practically all over NSW. The signs gave the distance in miles from Sydney (the company was actually situated near Central Station), and gave travellers some idea of where they were on their journey.



Some of the recent decal releases by BGB. On the left is the Griffiths Tea signs, in the centre the NSWR symbols and on the right the SAR and ANR bogie exchange symbols.

The decals (20 to a sheet) of the sign are illustrated by a 17 mm × 4 mm blue panel, lettered with white letters/numbers. The only lettering missing from the sign is the mileage numerals, which are supplied on a separate sheet, the individual numbers requiring transferring to the main sign.

The linework and colour separation is very sharp and the sizing appears correct. These are very useful detailing decals for the period modeller.

Bob Gallagher

NSW 'R' emblems, bogie exchange plates, diamonds and roller bearing decals in HO scale by Broad Gauge Bodies, PO Box 6, Marden 5070. Price: $1.70.

This 142 mm × 53 mm decal sheets contains four detailing components for the NSWR modeller. The bogie exchange plate, a black 'X' on a white plate, is used on the side and ends of bogie exchange vehicles. The white roller bearing signs are positioned (generally) on the lower sill above the bogies on high speed vehicles. The red diamond was used on vans capable of passenger train operation, including MRC, TRC and vans of the LLV/GLV series.

The 'R' emblem, a white R on a red 24" plate, was used on some vehicles in the early 'Shirley' era. It is one of the many sized 'R' emblems.

All decals are correctly sized and slide readily off the backing paper without tearing or stretching.

This is the first participation by BGB into the NSW market, and these high quality, correct sized decals are very welcome.

Bob Gallagher

Bogie exchange, S and P symbols and roller bearing signs for SAR and ANR in HO scale by Broad Gauge Bodies, PO Box 6, Marden 5070. Price: $1.10 per pack.

These 136 mm × 53 mm decal sheets are designed to provide the necessary lettering symbols for the side of modern bogie rolling stock. The ANR use black symbols on yellow plates with yellow roller bearing signs, while the SAR used black symbols on white plates with white roller bearing signs.

BGB provide for modelling demands by providing a ANR sheet (No. 34) and a SAR sheet (No. 39). All colour separation, line work and sizing is first rate, and the decals slide off the backing sheet without stretching or tearing.

Designed for the modern modeller.

Bob Gallagher

Vic Rail tangerine (VBPY) emblem and lining decals in HO scale by Broad Gauge Bodies, PO Box 6, Marden 5070. Price: $1.10.

These decals are designed for use on the BGB model of the VBPY. Included on the 65 mm × 153 mm sheet is 8 'tea-cup' emblems, 4 × 2 mm lines and 4 × 4 mm lines. All are coloured 'old' silver and readily transfer from the backing sheet onto the model. As can be seen by the accompanying photograph of the VBPY, the sizing of the decals and linework is finely captured.

Bob Gallagher

NSWR "MB" bogie covered van kit in HO scale by Rails North Models. Available from Casula Hobbies, Phoenix Plaza, Macquarie Street, Liverpool 2170. Price: $14.95.

As a result of the introduction of TRC refrigerator vans in the early 1950s the older MRC vehicles became redundant to refrigerator traffic. During 1957 certain vehicles had the roof walks and ice hatches removed, resulting in a subsequent recoding to MBC. Some vans were further altered by removing the interior insulation and coded MB. A number of MBs have mansard roofs. They have run the gammut of the colour range, from the earlier all over black to the latest all over blue, even in some instances with silver roofs. They are used as general purpose bogie vans.

The kit under review is of the matchboard sided MB. It consists of two sides, two ends, a floor and brake wheels all cast in epoxy. A piece of balsa fits in as the roof support and the roof itself is thin aluminium. A length of thin wire is supplied for brake rodding and the like. A two-sided instruction sheet makes up the balance of the components which are all packed in a clear plastic bag with the familiar card top.

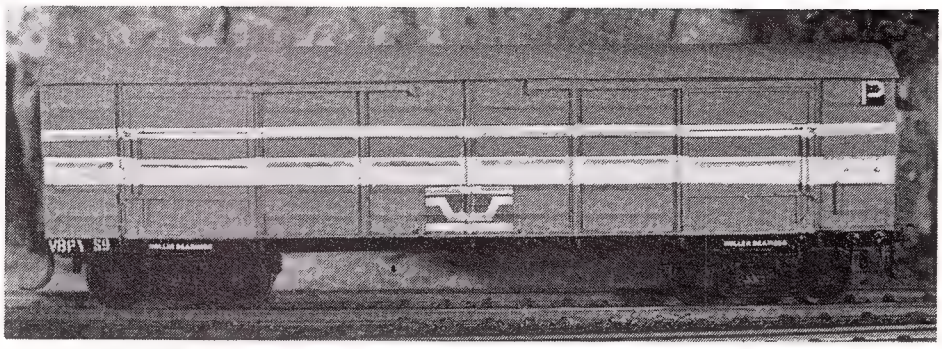
All epoxy parts are clean, crisp and square. Flash is minimal and removes easily with a fine file. All joints were tack glued with one of the super glues and then bonded more firmly with Araldite. The aluminium for the roof was curved by first placing it on a note pad and rolling it with a piece of broom handle. Downward pressure on the dowel, coupled with the springiness in the note pad gave a uniform curve. The roof was then glued in place, filled and dressed with a body putty.

The correct bogies are the 2AE type, available in brass from Berg's Hobbies, plastic from PMH and white metal from Protype. I used Berg's bogies for this model, and PMH for the smooth-sided model. Both brands work equally well.

I painted the completed model in Floquil British Rail blue, lettered and numbered it using the small numbers off American transfer sheets (the Walther's ones) and added the R insignia from the Broad Gauge Bodies range. Kadee No. 5 couplers were fitted direct and resulted at the correct height. The model finished up dimensionally correct and weighed 90 grammes complete.

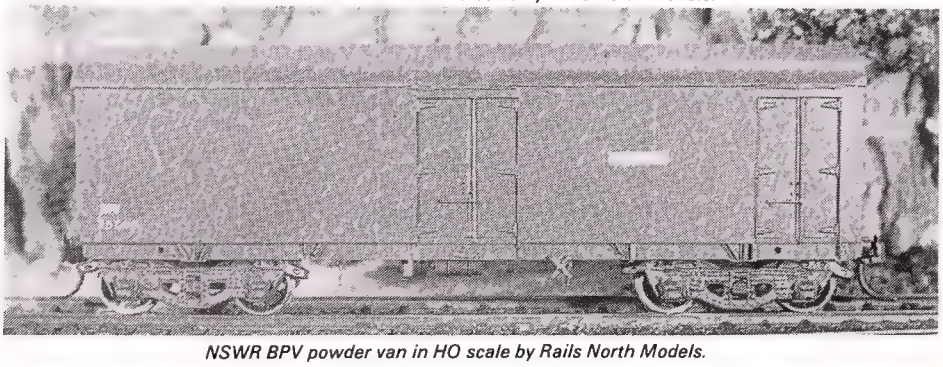
All in all, I found this kit a breeze to put together (about 2 hours all up plus painting). Two coats of blue did not hide the seams in the matchboard siding. A nice model up to the excellent standard set by this manufacturer.

Allan Brown



VR (tangerine and silver) decals on a VBPY van by BGB.

NSWR 'MB' box car in HO scale by Rails North Models.



NSWR BPV powder van in HO scale by Rails North Models.

BPV Explosives van kit in HO scale by Rails North Models. Available from Casula Hobbies, Phoenix Plaza, Macquarie Street, Liverpool 2170. Price: $14.95.

The BPV (NZPA) code has existed in the NSWR for many years but the vehicle modelled on this occasion was not introduced until 1973/74. It is a conversion from the MRC/MBC ice bunker reefers which became redundant following the introduction of the NRY reefers for the export meat trade.

Externally they resemble the one-off GRC gas reefer but with a double door on each side at the same end of the body. The central doors are also retained. At least seven known conversions were made, maybe more. A frequent roster for the vans if for I.C.I. from Tocumwal to Parkes/Bogan Gate.

The model is along the usual Rails North style of grey epoxy castings; 2 sides, 2 ends and floor plus balsa sub-roof, aluminium roof and wire for handrails, etc. The model was assembled following the instructions which should be read beforehand, and carefully, as they are for both the BPV amd MB models. This is where a prototype photograph would assist greatly. It is also advisable to dry assemble the sides/ends to check that there is no interference to a square joint. If necessary a slight amount of chamfer may be necessary on the back of the side. Otherwise the model fell together. The final result, like all Rails North models, is dependant on the patience and ability of the modeller to take advantage of the detail potential the manufacturer provides. If fully utilised, an excellent model results. In other words super-detailing is a must.

On the subject of painting, the instructions suggest the model should be painted black. This could certainly be the case today but when initially issued to traffic, they were P.T.C. blue body, underframe and bogies with a silver roof. The code boards and Explosive boards were red with white lettering.

Another quality model with high potential from Rails North.

Phil Collins

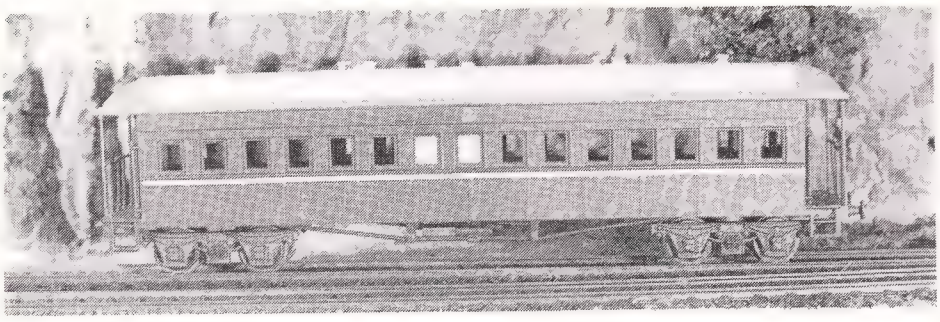
NSWR "FO" end platform car kit in HO scale from Camco. Kit available from Casula Hobbies, Phoenix Plaza, Macquarie Street, Liverpool 2170. Price: $14.95.

The end platform cars were introduced to the NSW system during the years 1879-1915. The total number of cars does not appear to have been documented, but suffice is to say that they represented 40 per cent of the passenger car fleet at that time. They were in three basic groups: suburban cars with toilets, Suburban cars without toilets, and end platform tourist cars. A more in-depth history of these vehicles appeared in the AMRM of July/August, 1972 (now out of print).

The basic sameness of this particular type of vehicle allows for it to be modelled in something like 16 different coded vehicles, not to mention the numerous Ways and Works vehicles, greyhound cars, mobile toy showrooms and the like. The cars are different only in that some had battery boxes, generators, more roof vents, toilet locations, etc. But structurally they are much the same.

This is an injection moulded kit which consists of a one piece body (sides, ends, floor/end platforms), roof, bogies and wheels and bearings, end rails, truss rods, corner grab rails, plus ancillary equipment (buffers, roof vents, brake cylinder, air tank). The body is moulded in a basic Tuscan red whilst the other parts are in a grey/black. All components come in a plastic envelope packaged in Camco's familiar fold down insutruction sheet. A large photo takes up the cover of the package.

Instructions are well set out and easy to follow,



NSWR 'FO' coach in HO scale by Camco.

thus making the model simple to assemble. Whilst the individual parts are already coloured, it cannot be denied that a painted model must look better in the long run. Modellers are therefore advised to paint all parts before assembly. General assembly throughout is with one of the polystyrene glues, either tube or liquid.

The bogies assemble easily after first having inserted the brass bearings. Tap them home slightly to allow for the axle length. Watch the bolster height though: if it is level with the top of the side frames the coupler height will be correct. I sat it lower, against the bottom lug on the side frame, and had to remove the coupler platform. Kadee No. 5s were fitted.

One has to paint and line the body, plus insert the window glazing (if desired) before the roof is glued on. Then comes the fitting of the end railings.

Unfortunately fitting 'glazing' is not an easy task, for many methods of glazing have been tried but none seem to bond (permanently) to the side of the car. There appears to be some 'anti-glue' component in the plastic material. (AMRM would welcome letters from readers on a successful method of glazing the FO. Ed.)

The matter of weight is left to the individual. Some will say the model needs it, others will say not. It's a simple matter of placing a small amount of lead on the floor before fixing the roof on.

The completed model is an attractive and serviceable vehicle, and is as dimensionally correct as one could expect. It will form the nucleus of substantial consists on many a layout in its many and diversified codes, not to mention kit bashing it to represent the large number of special purpose vehicles. It is a car that NSW modellers have been waiting for in injection form for a long time and well worthy of the wait. A top class kit at a price which, all things considered nowadays, is realistic.

Allan Brown

MAIL BAG

Continued from page 48

Sir,

Re: Articles on 'O' gauge.

Mr G. A. Bishop, AMRM August 1982 refers to articles by the late Bob Harvey and you responded by expressing the need for a commitment to update.

I would suggest that updating could be confined to sources of wheel and bogie casting supplies, as the methods and materials suggested are still current and available.

At the age of 14 having had no previous modelling or soldering experience, I constructed the M40 tank from one of Bob's articles.

The articles were very easily followed as in a number of instances Bob had constructed the model prior to writing the article, and he took great care to explain the construction in an easily interpreted manner, and also provided complete plans and layout drawings.

The railway modelling scene would benefit greatly if permission to reprint was obtained.

E. W. Sturman
Duncraig 6023

As basically expressed in our initial response to this plea, permission to reprint is only the first (and most simple stage) of re-presenting Bob Harvey's work. It is possible that the above letter has cleared up the method problem (many 'old' articles use methods that are out-of-date in material/component supply, i.e. fluxes) but there is still the need for redrawing the plans, diagrams, getting photos (that we can use) of both prototype and models.

Here we need a commitment, preferably by an 'O' scaler. Are there any takers? — Editor.

Sir,

Recently I was engaged in compiling a history of the A.I.F. unit I served with for six years in World War II. One of my correspondents' letters brought to my notice information of which I was previously unaware, being at the time serving elsewhere.

In 1943 the 2/33 Australian General Transport Company A.A.S.C. serving in Port Moresby, had some of its vehicles employed in transporting large quantities of railway track, wagons, etc. to the wharf and loaded on to a ship or ships. Destination unknown.

All this material was marked Krupp and the story about the equipment was that it was originally intended for a railway line from 'Moresby to Lae'!

This is not likely to be the true story as anyone who has crossed the Owen Stanleys' would realise. More likely it was for a plantation or a logging operation. Does anyone know more about the history of this equipment, as a railway line project in the New Guineas sounds a very interesting proposition.

Incidentally, some members of the same transport company serving with 9th Division in the Labuan-Borneo invasion had another rail connection, operating converted jeeps as motive power on the railway there.

One other query please. Some years ago in an Ian Allan publication was an article with photographs of the GWR locomotive 'Pendennis Castle' being prepared for shipment to Western Australia, after being purchased by Hamersley Iron for tourist use on their Pilbara Railway.

I have never heard or seen any further mention of this fine locomotive. Did it arrive, where is it now?

I have read your magazine since issue No. 1 and it gets better every time I open each new issue. Congratulations and many thanks for many hours of interesting reading and information and much help for a railway buff of 60 odd years enjoyment. Starting with Gauge 1 LNWR 4-4-0 through Hornby O and OO, HO and now back with an indoor-outdoor LGB gauge 1.

In regard to keeping track surface clean, I have been using 'Redex' oil additive on the large surfaces of LGB and local brass track, indoor and outdoor, for some months with, so far, pleasing results. Testing is a bit early yet for long term results.

R. G. Nash
Yagoona 2199

Sir,

Whilst working on the SCMRA stand at the recent AMRM Exhibition in Sydney many people approached me with glowing comments on the quality of the magazine. So I take this opportunity to pass on to you and your volunteer staff these congratulations, and also to add mine.

Many thanks for a continually improving magazine.

John Brown
Bogan Gate 2876

Sir,

In your review of Rails North Models 'NCX' (October 1982), you stated 'The wagons were numbered 31661-31675 and 31901-31930, 45 units in all, although there were 50 on the records in mid 1980'.

The reason for the extra 5 units would be that there are (or were) a group of NCX upper bodies placed on an 'E' wagon underframe and floor. If memory serves me right, these wagons were numbered in the '29' series.

Hoping this will help identify the extra NCX units.

Mark Nethery
Goulburn 2580

AMRM NEWS

Continued from page 45

As costs rise and demand decreases for the binders new stocks will not be available until the middle of 1983. All work in packing and posting these binders for mail order customers was done by volunteer labour from SCMRA members, in their spare time.

1983 Calendar.

Southern Cross Model Railway Association has produced their usual calendar for 1983. They have also included, on the flip side of it, , a set of details useful to the HO modeller. The table sets out the wire gauge (SWG & BS), twist drill size (metric, number and fraction) and scale inches in HO scale from 1/8" to 12" and the actual metric and imperial decimal sizes. The calendar is issued with any request for the AMRM plan and photo index (see notice elsewhere for details). The calendar is also available separately by sending a stamped self addressed envelope to SCMRA, PO Box 317, Epping, 2121.

Guessing Competition.

Guessing competitions have always been a good method for raising the odd dollar or two and the size and style of prizes often varies. The Zig Zag group have had two competitions so far with brass NSWR steam locos as the prize, the last was finalised at the recent Sydney Exhibition. There was also a novel competition at the exhibition whereby the prize was a slightly used refrigeration unit. The organisers found it necessary to buy a new unit for keeping drinks cool at the Nibble Bar, and not having a use for it after the exhibition, used it as the prize in a guessing competition.

At the Birkenhead Point (Drummoyne) exhibition in January (29,30,31 '83) the prize for a guessing competition will again be a little unusual. To be called the 'Roundhouse Raffle' the prize will not be a loco or a train set but a collection of specialist bits and pieces that are usually found in specialist model railway shops. Included will be can motors, wheels, painting accessories and jewels. The items will be valued at over $300 and the proceeds will be in support of the Epping Branch Sub-Normal Childrens Welfare Association. Tickets will be on sale at the exhibition.

Narrow Gauge Survey.

Entries for this survey have now closed and the results are being tabulated. Hopefully details will be published in the next issue of AMRM. We were pleasantly surprised by the overall response to this survey.

Next Issue.

Generally, well....for the past three years anyway, the February issue has been our colour issue. For numerous reasons this will not be the case in 1983. As we will be celebrating 20 years in print in March/April 1983, we will do it in style with some colour work.

While on the subject of colour we are always seeking suggestions on subjects to be covered. Readers are invited to send in ideas of what they would like to see in colour as well as what they can use (modelling wise) in colour. Readers need not be reminded that they are always welcome to make suggestions for subjects to be covered in AMRM.

N Scale.

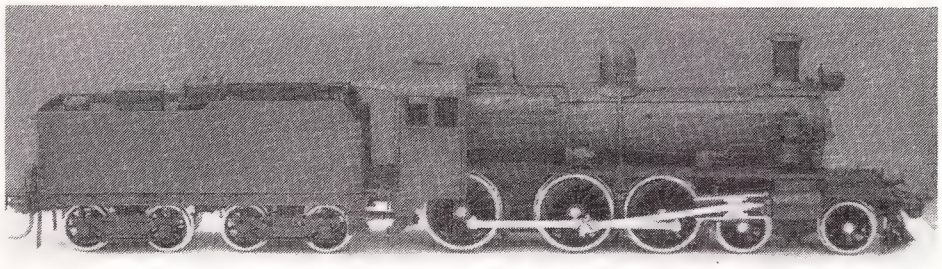
There is a constant growth in the numbers that model Australian Railways in 'N' scale, and we at AMRM strive to assist those modellers with articles and plans. Our problem at present however is: 'To what scale do we print the plans'. Unfortunately N scale (or N gauge as it is often called) is supplied commercially in both 1:148 scale and 1:160 scale. Which is the 'CORRECT' scale for Australian modellers?

Please write in and advise us what scale you use. After 2 months we will add up the totals and the scale that receives the greater numbers of 'votes' will become the scale in which we will print plans. If we do not receive any letters on the subject the total of the votes will be the scale used (i.e. ZERO).

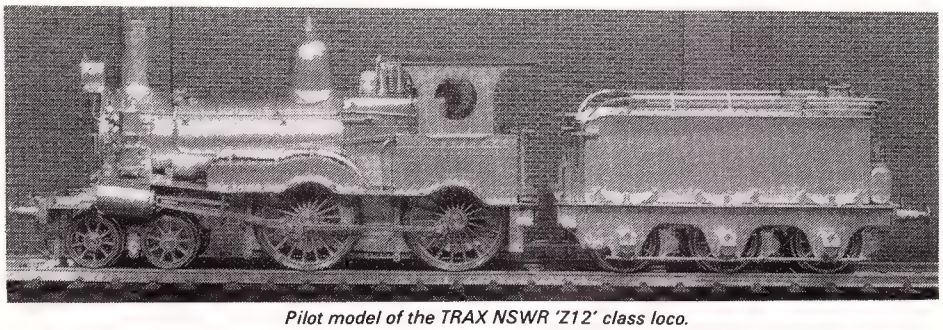
Send letters to: N Scale, SCR Publications, PO Box 235 Matraville, 2036. Deadline: February 1,1983.

COMMERCIAL NEWS

Despite some claims to the contrary the econ-



Pilot model of the VR D3 being built for Broad Gauge Models.



Pilot model of the TRAX NSWR 'Z12' class loco.

omic recession is gradually affecting the model railway hobby in Australia. It can be noticed by the gradual decrease in goods 'on-the-shelf' awaiting the purchaser. Despite this there has been some movement of goodies in recent weeks.

Arrivals.

In the brass ready-to-run range the Mansfield NSWSRA 45/SAR(ANR)600 class diesel arrived in late August.The SAR 'RX' arrived in early October and the Broad Gauge Models' VR 'D3 arrived in late October. Stocks of the CAMCO 'FO' coach are reaching all outlets and the TRAX NSWR 'MRC/MBC' arrived in quantity.

Also in October, Broad Gauge Bodies released the 'CALTEX' advertising van, along with some more decals. The VR 'Z' van, imported by McBees Hobby Centre, arrived in mid September and met with such good response that the order has been increased....well, doubled really.

The Sydney Model Railway Exhibition has become the release point for new kits and this year saw a number of new kits from Rails North Models. Included (in HO scale) were a 'KF' flat wagon, 'CG' concentrate wagon, 'ACM' composite sleeping/sitting car and a water jin in a 'K' wagon kit.

At last Mansfield Hobbies have a few of the whitemetal casting designed to improve the Lima 42 class loco. We say at last for there has been many hours put into these castings, and many have been waiting for them.

T.C.Rail Models have modified some of their passenger car kits by now supplying a cast roof. Many modellers had problems with folding/bending the aluminium sheet to shape, so the new style roof should make the kits easier to assemble. All of the 'R' cars are now available, as is some of the 'MUB' set, and now there is a 'MAL' sleeping car available. The MUB set and the MAL all have the cast roof. Further details of the cast roof will be included in the review of the models.

Expected Arrivals.

Australian Locomotive Company have advised that the VR 'J' has been delayed till early 1983, as has the VR 'DERM' from McBees. Model Dockyards' VR 'R' is believed to be near, while MD have advised the cancellation of their VR 'D^3' project.

Bergs Hobbies have advised of the deferment of their NSWR 'Z20' class project until 1984, while TRAX have advised that they will be importing an HO scale 'Z20' class model in early 1983. The Z20 will follow the Z12 class which is still expected late this year. The D53 from Bergs Hobbies is also still expected late this year.

As this issue went to press Bergs hobbies advised of the arrival of a new HO scale plastic kit for a NSWR 'CV' van, and Mini Models advised of the arrival of the NSWR 'BCW' cattle van kit, in HO scale.

Broad Gauge Models are still working on their next wagon kit which will be the 'U' van.

Future Arrivals.

Broad Gauge Models have advised that their next brass loco, expected in May 1983 will be the VR 'A2' express loco. It will be the spoked wheel version, with Walschaerts valve gear and it will be supplied with an oil tender and fittings.

Mansfield Hobbies are keeping their customers guessing with their next HO scale loco, although they have indicated that they are definitely going to do one early next year.

Model Dockyard have announced that the project for the VR 'G' class Garratt is now full steam ahead, in two gauges, HOn2 1/2 and HOn3. Past history of models produced in two gauges has shown that overseas customers will grab all that is available, so do not hesitate to place an order if you want one.

Casula Hobbies have now also entered the brass loco market and will be producing a model of the (SRA of NSW) 80 class. The designated scale will be HO but feelers are out for interested parties in 'N' scale.

Other News.

Is there a market for more NSWR C38 class locos on the local scene? There has been a glut of them in HO scale over recent years, but what about 'O' gauge? If you are involved in the 'O' gauge revival and interested in a brass hand built C38 then you should contact David Anderson at Mansfield Hobbies and advise him of your interest. The question will be of course, which scale....HO or 7mm? Only consumer demand will answer this question.

It is disappointing to note that FSM have closed their doors for the last time. Trading as Finecraft Scale Models, Ross and Bruce Usher have been in the business of making models for over 30 years. In the mid 1970's they started building metal model railway loco kits for HO modellers. Ross was responsible for the patternwork, while Bruce, kindly known as the 'Boss', looked after production and general management.

Unfortunately, for many of us modellers, age and illness has forced both to consider retirement from what has become a time consuming business. On behalf of all modellers who have benefited from the FSM loco kits, we at AMRM thank Ross and Bruce for their contribution to the hobby and wish them good health for a lengthy retirement.

All is not lost however for the Usher boys have indicated that, given the right circumstances, the FSM range of loco kits may be available to the modelling public once again, but under different ownership. ■

SCALE SPEED

To convert real speed (ms^{-1}) into scale speed ($kmhr^{-1}$), measure the time it takes for your locomotive to travel a distance. Time is to be measured in seconds, distance in metres. Enter the results in the suitable equation below.

Distance = d, time = t.

LGB	1:22.5	$\frac{81 \times d}{t}$	= scale $kmhr^{-1}$
O	1:43.5	$\frac{156.6 \times d}{t}$	= scale $kmhr^{-1}$
OO	1:76	$\frac{273.6 \times d}{t}$	= scale $kmhr^{-1}$
HO	1:87	$\frac{313.2 \times d}{t}$	= scale $kmhr^{-1}$
N	1:148	$\frac{532.8 \times d}{t}$	= scale $kmhr^{-1}$
N	1:160	$\frac{576 \times d}{t}$	= scale $kmhr^{-1}$

Inversely, to change scale $kmhr^{-1}$ to real ms^{-1}, use the constants below in the equation $\frac{kmhr^{-1}}{k}$ = real ms^{-1}.

LGB	1:22.5	k=81.	HO	1:87	k=313.2.
O	1:43.5	k=156.6.	N	1:148	k=532.8.
OO	1:76	k=273.6.	N	1:160	k=576.

As examples, the Roundhouse Climax supposedly has a maximum scale speed of 25 mph, or (x1.6) 40 $kmhr^{-1}$.

It is a HO locomotive, so $\frac{kmhr^{-1}}{313.2} = \frac{40}{313.2}$ = .1278 ms^{-1}.

Then, in reality, it travels at .1278 ms^{-1}, or ($x\frac{3600}{1000}$) .4601 $kmhr^{-1}$ at full speed.

Mine takes 35 seconds to travel 70 cm at slow speed. (Remember, 70 cm must be changed to .7m.)

$\frac{313.2 \times d}{t} = \frac{313.2 \times .7}{t}$ = 6.26 $kmhr^{-1}$.

Its scale speed at slow speed is, therefore, 6.26 $kmhr^{-1}$, or (÷1.6) 3.9 mph.

For those who don't know, or don't realise,

1 km = .621 miles,

therefore,

1 kmhr = .621 mph,

or,

1.6103 km = 1 mile,

therefore,

1.6103 kmhr = 1 mph,

so that you may have your speeds in beloved mph.

$(\frac{kmhr^{-1}}{1.6103} = mph)$

You may feel that I am wrong, if so please write and offer your opinion, but first, here is my logic.

Something goes at x ms^{-1},

therefore it travels at $\frac{x}{1000}$ kms^{-1},

therefore it travels at $\frac{3600}{1000}$ $kmhr^{-1}$.

Of course, if it is a HO model, its scale speed will be $\frac{87}{1} \times \frac{3600}{1000} \times kmhr^{-1}$.

But ... $\frac{87}{1} \times \frac{3600}{1000}$ = 313.2 ... and ... x ms^{-1} = $\frac{\text{distance travelled (in min)}}{\text{time taken (in secs)}}$

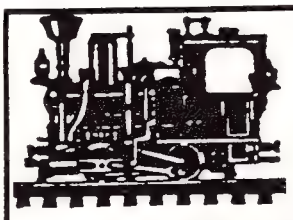
therefore ... 313.2 x $\frac{\text{distance travelled}}{\text{time taken}}$ = scale kmhr

The inverse is easy enough to find, by reversing through the equations.

313.2 is a constant for HO, and by substituting in other scale ratios, other scale constants may be found. If I have not mentioned your scale constant, simply multiply the scale ratio by 3.6 ($\frac{3600}{1000}$), and use in the aforementioned equations.

Let us say you work in TT, 1.100, then the constant you should use is 360.

Rowan Cole.



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CON COR Source Book I 1982/3 Edition, 112 pages also Z scale. Posted	$5.40

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Smooth Side Passenger S.Fe, GN, etc	$10.50
DL-109 S.Fe, NH, Sth. Pow.	$75.85
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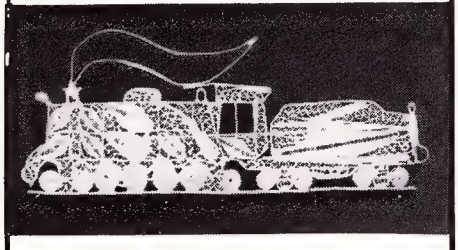

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At time of writing we intend to continue at Bankstown Markets during 1983. Watch Feb. issue for confirmation. We will not be there between Dec. 12—26, so get your Xmas presents before Dec. 5th.

Merry Xmas & Happy New Year to all AMRM readers.

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When ordering, write to our mail order dept., address at the top of the page. Please do not send CASH through the mail. Payment by Postal Note, cheque or Bankcard — please include card number, expiry date, authorisation and signature.

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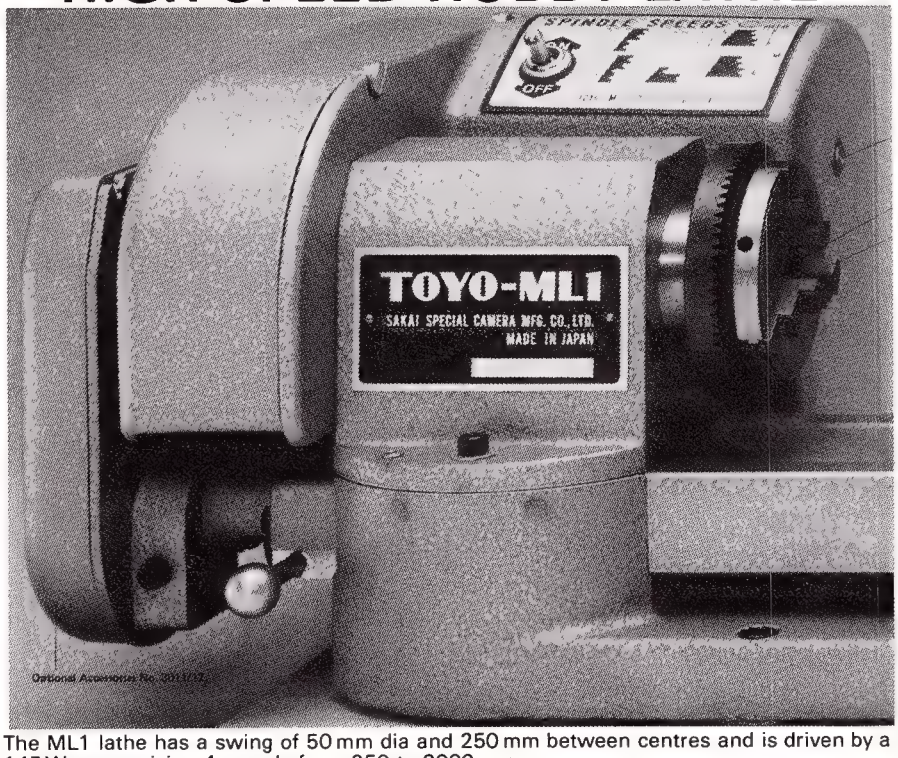

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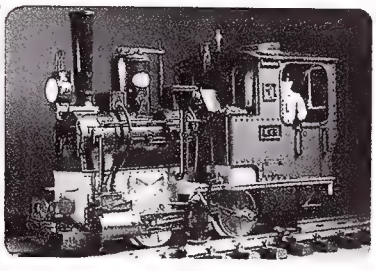
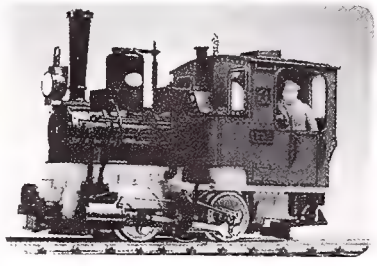
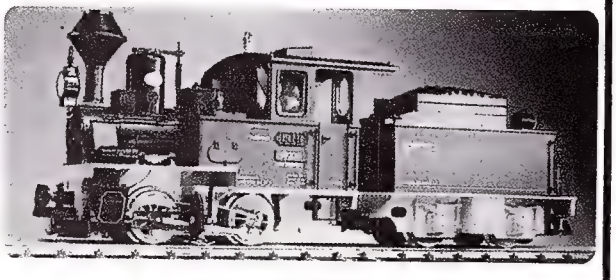


2010 SKGLB

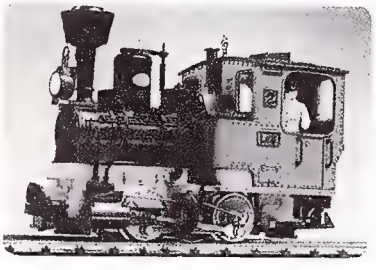


2010D Tank – smoke

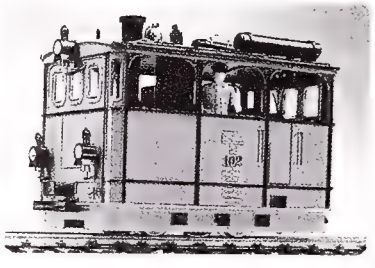


2015D KPEV – twin motors

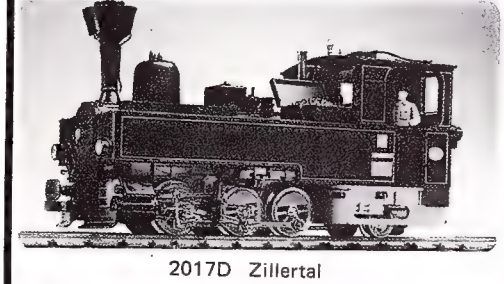
2017 U.S. General – two motors



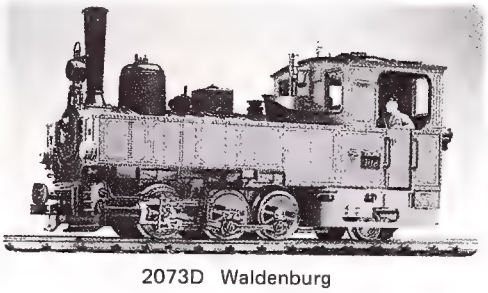
2020 Stain – 2



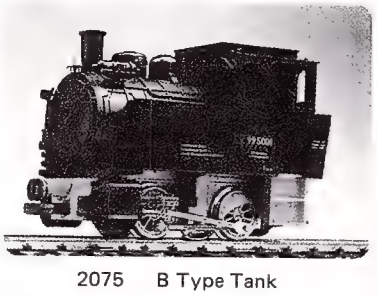
2050 Steam Tram



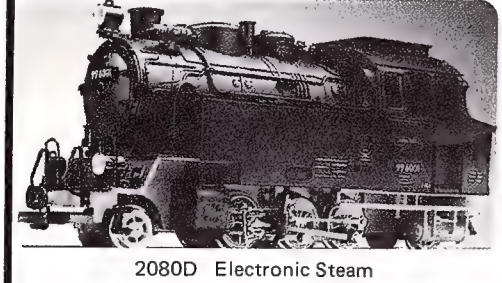
2017D Zillertal



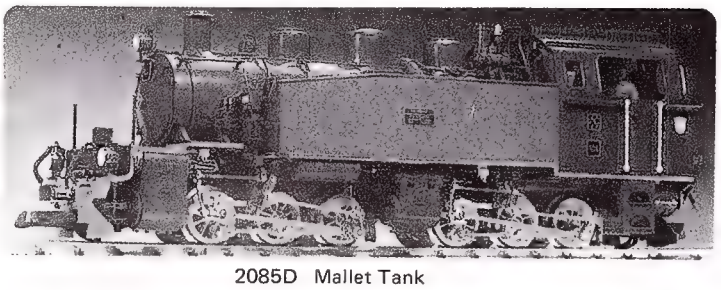
2073D Waldenburg



2075 B Type Tank



2080D Electronic Steam



2085D Mallet Tank

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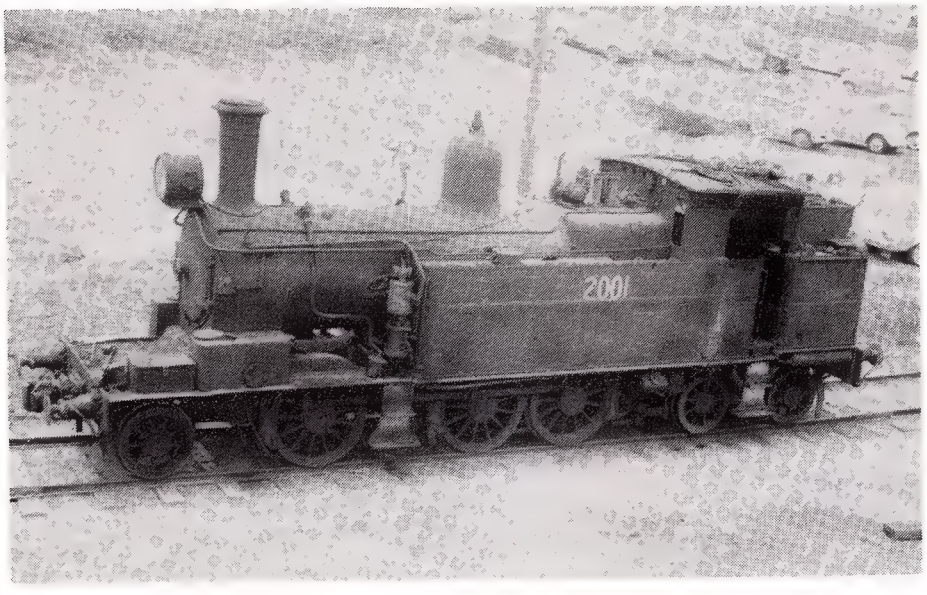

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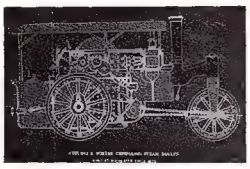
A Merry Xmas to all our customers



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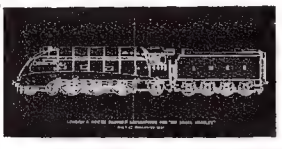

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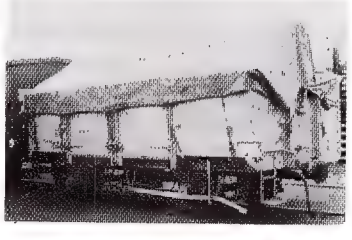
BROAD GAUGE MODELS
P.O. BOX 136 BORONIA VIC. 3155.



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Complete your GY with our etched brass brake lever and brake rigging. Enough parts supplied to complete 5 wagons. Price $6.50.

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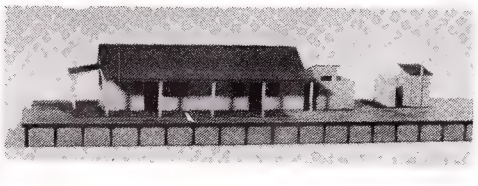

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A^2 Prototype Photograph courtesy VicRail.

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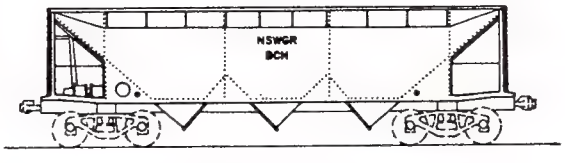

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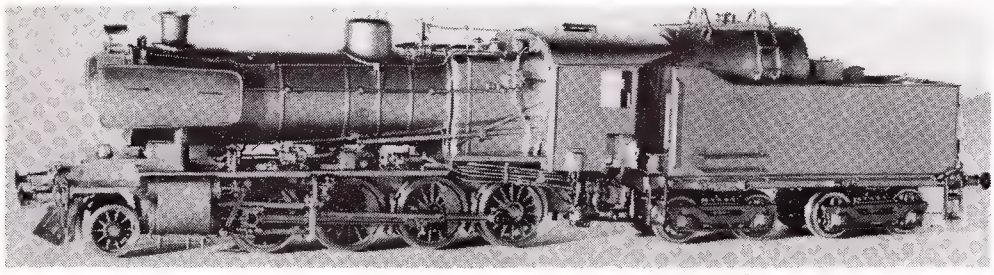

PHOTO OF OUR HAND BUILT "J" MODEL
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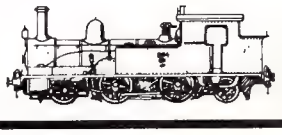

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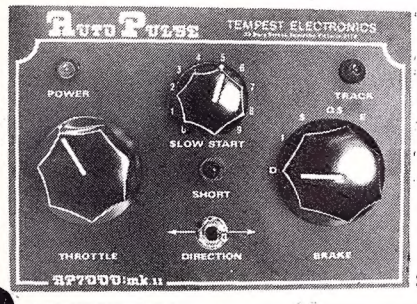

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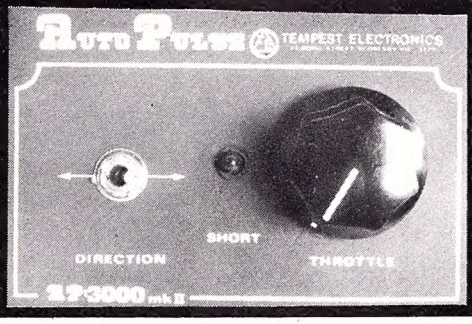

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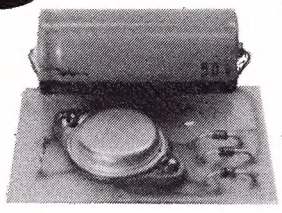

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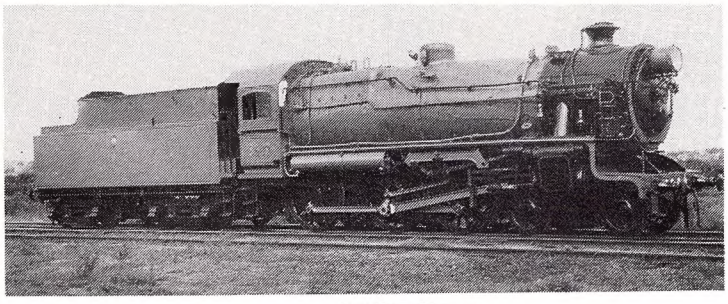

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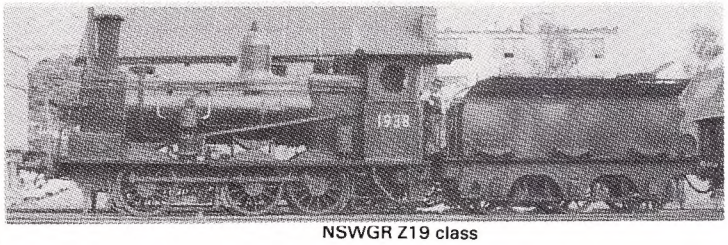

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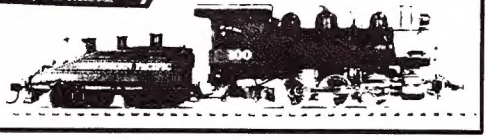

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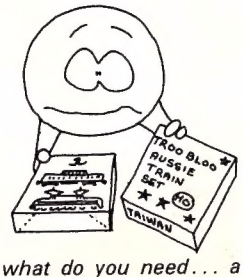

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